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SUPERFUND ISSUES

HEARINGS

BEFORE THE

COMMITTEE ON FINANCE
UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

SECOND SESSION

SEPTEMBER 19 AND 21, 1984

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SUPERFUND ISSUES

WEDNESDAY, SEPTEMBER 19, 1984

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, DC.

The committee met, pursuant to notice, at 10:02 a.m, in room SD-215, Dirksen Senate Office Building, the Hon. Bob Dole (chairman) presiding.

Present: Senators Dole, Symms, Durenberger, Wallop, Heinz, Chafee, Danforth, Roth, Long, Bentsen, Boren, Bradley, and Mitchell.

[The press release announcing the hearing and the prepared statements of Senators Dole, Heinz, Symms, Moynihan, Bradley, and Durenberger follow:]

[Press Release No. 84-175]

For immediate release, September 7, 1984.

U.S. Senate, Committee on Finance, SD-219, Dirksen Senate Office Building.

FINANCE COMMITTEE SETS HEARING ON SUPERFUND ISSUES

Senator Bob Dole (R., Kansas), Chairman of the Committee on Finance, announced today that the Committee will hold a hearing on the tax issues raised by the Superfund legislation.

The hearing will be held on Wednesday, September 19, 1984, at 10:00 a.m. in Room SD-215 of the Dirksen Senate Office Building.

The Committee is interested in hearing testimony relating to proposals to extend the Superfund hazardous waste cleanup program, with particular focus on changes in the present Superfund taxes and on additional revenue sources that have been suggested to raise funds for the program. "Everyone is committed to continuing the Superfund program and to a strong Federal effort to clean up hazardous wastes," Senator Dole said. "The issues we are particularly interested in exploring in our hearing concern the size and scope of the cleanup fund and the impact that tapping particular revenue sources would have on affected industries and on the economy as a whole. Since the House of Representatives passed its Superfund bill, there has been considerable concern that the haste with which the House acted required sudden, and not necessarily well-informed, decisions on many of these questions. In our Committee we want to avoid mistakes the House may have made and determine how best to raise money for Superfund in a fair, efficient, and sensible manner."

STATEMENT OF SENATOR DOLE

This morning we begin two days of hearings on proposals to extend the Superfund program for five years. While the present program does not expire until next year—specifically, the taxes funding the program terminate on September 30, 1985—the House of Representatives has already passed legislation that would extend and greatly expand the program. In addition, last week the Senate Environment Committee ordered reported S. 2892, which would extend the program for five years and expand program responsibilities to a cost of roughly $7.5 billion over 5 years. H.R. 5640, the House-passed bill, would cost at least $10 billion.

There is a lot of interest in extending Superfund. And let me say right at the outset that there is virtually no disagreement that we will extend the program, and that we will increase funding for the program. I support that, and I know of no real opposition. But that still leaves some very important questions to answer: how much does the program need, how much can EPA spend effectively over the next five years, and how should we raise the revenue to fund hazardous waste cleanup.

FOCUS ON REVENUES

These are all questions that we need to explore. But the main concern of this committee, in connection with this legislation, is the size of the trust fund and the way in which it is financed. The Environment Committee, in ordering reported S. 2892, did not specify revenue measures for the bill, partly in deference to this committee. However, in a letter dated September 17th, Chairman Robert Stafford and ranking member Jennings Randolph of that committee indicated that "there was a broad consensus among Members against exclusive reliance on the current feedstock and crude oil taxing mechanisms for supporting an expanded Superfund program." I am sure we will want to take into account these views of the Environment Committee, particularly since the House-passed bill does in fact rely exclusively on the current feedstock and crude oil taxes to raise about $7.8 billion: over five times as much as Congress planned to raise from the 1980 Superfund bill over the first five years.

Revenues for the Superfund, and particular revenue sources, are what we need to focus on. When the costs of a particular government program, such as hazardous waste cleanup, are by design allocated to particular industries, we do need to consider the impact on those industries of making significant changes in the structure and the level of those taxes. We also have to consider the effects on our economy as a whole. We want an effective tax scheme, but we also want to be fair, and we want to be sensible.

I hope the witnesses this morning will be prepared to fill in some of the gaps in our knowledge: there is a lot of detailed information that we have to digest in order to evaluate revenue options that might be tapped for the Superfund program. These hearings should start the process of informing this committee on the relevant issues.

STATEMENT OF SENATOR JOHN HEINZ

I am pleased that the Chairman has agreed to schedule these hearings. The Senate Committee on Environment and Public Works has worked in a timely and conscientious manner to report a Superfund bill. I believe we should reauthorize the Superfund during this Congress. Although the law enacted four years ago does not expire until next year, it is important that we make a statement to the American people that we are not going to turn our backs on what is probably the most serious environmental problem of the decade: namely, the control of hazardous wastes.

My home state of Pennsylvania has 39 of the original Superfund sites identified by EPA and just last week six more sites were added. Of course these are just the most dangerous sites; EPA investigated more than 1,000 sites across Pennsylvania in choosing those 45, and will look at a total of 22,000 nationwide.

Frankly, my constituents are scared about what's out there. They are nervous about those sites that have been identified as having hazardous wastes and are even more nervous about what may be out there, but hasn't yet been found. They are angry that EPA hasn't moved quickly enough to clean those Superfund sites near their homes. Too often, EPA's response to these complaints has been that they have limited resources and too many responsibilities. With that in mind, we must act now to ensure adequate funding for the agency to get the job done, get it done properly, and get it done in a timely manner.

The Environment Committee reported out a bill which sets funding at $7.5 billion over five years for the Superfund. This level is considerably higher than the first $1.6 billion five-year program, but considerably less than the $10.2 billion five-year program passed by the House. Lee Thomas, the Assistant Administrator for Solid Waste and Emergency Response at EPA, has testified that the agency would not be able to effectively spend the amount provided for in the House bill. I believe that the annual $1.5 billion called for in the bill before us today is a reasonable figure and adequate to cover the federal government's responsibility to respond immediately in emergency situations and to complete the cleanups at the sites identified as being most dangerous in the long term to public health. The responsibilities added by the Environment Committee will not burden the agency to the point where they are not effectively using these funds, but adequate funding must be provided.

One amendment accepted by the Environment Committee which addresses the problem of maintaining Superfund sites after EPA has completed its initial remedial response, is of particular interest to me. State officials are worried that they will not have adequate resources to properly care for these sites once EPA's responsibilities have ended. It makes no sense for the Federal government to do quick fix of surface contamination when there is extensive groundwater contamination at a site. The State will be burdened with the very costly responsibility of an operation and maintenance program designed to clean up the subsurface. This is not a cost-effective solution. Long-term costs should be considered up front when the cleanup plan is selected. Under this amendment to the Superfund, the Federal government will share 90 percent of the O&M costs for the first five years instead of just the first year after the cleanup has been completed. It is vital that those living around these sites have the assurance that once EPA has acted, that there will be no continued threat to public health and safety.

In raising the necessary revenue, we must look closely at the existing tax scheme: its revenue-raising ability and its effect on the industries involved. The bill before us has no recommended tax figures—just a list of those substances that are taxed under the current law. We must look at what the feedstock tax has done to the petrochemical industry. I am sure that some of those testifying here today can fill us in on that. We must also look at what effect an increased tax rate will have on both the domestic and world markets for these goods. But we must raise adequate revenue to get the job done and to get it done right. This may mean expanding the tax base. In doing so, however, we should not include substances which do not contribute to the hazardous waste problem.

I am encouraged that we are considering this bill. I believe that it is a very important issue. However, we must proceed with caution. The program has had its problem in the past; provide it with an efficient and effective future. We need a strong and effective Superfund. In order to achieve that goal, we will have to raise adequate revenue, but in so doing we must be sure that all parties are treated fairly.

STATEMENT OF SENATOR STEVE SYMMS

Good morning. I am not sure if I should thank the Chairman for holding these hearings since I believe that it is unwise for us to enact legislation to fund Superfund before we recess. It is particularly troublesome since Superfund does not expire until October 1985, and it appears that enactment of a Superfund bill now is simply and election year gimmick—a gimmick which will be at the expense of American jobs.

The original Superfund bill required EPA to present to Congress by December 1984 the results of several studies concerning the program's needs. Congress was scheduled to act on the results of these studies and reauthorize Superfund by 1985. In moving precipitously to reauthorize the law now, Congress is taking action before all of the information is available to determine what is actually needed, and the best way to fund those needs.

The Office of Technology Assessment (OTA) has completed an analysis of the House-passed bill which essentially confirms that the House bill will mean the loss of hundreds of thousands of jobs, billions of dollars to the U.S. economy, increased dependence on foreign sources of supply, and will have an impact on our international agreements on trade. Furthermore, the OTA study confirms that EPA cannot efficiently spend the money that is being raised in the House bill over the time period.

While I realize that the Senate Environment and Public Works Committee passed a more limited bill, the amounts authorized are still higher than EPA can handle because EPA does not have the programs and systems in place to efficiently allocate that much money.

Further, the study raises serious questions about how we pay for this clean-up. Obviously, I think this Committee is interested in raising taxes to pay for this program in a manner which will have the least damaging impact on the economy.

At this time, I would like to submit a copy of the OTA Report for the Record.

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Congress of the United States
OFFICE OF TECHNOLOGY ASSESSMENT
WASHINGTON, D.C. 20510

JOHN H. GIBBONS
DIRECTOR

September 10, 1984

The Honorable Steve Symms
Committee on Finance
United States Senate
Washington, D.C. 20510

Dear Senator Symms:

Thank you for your request for analysis on the financing aspects of the reauthorization of Superfund. We have received a similar request from Senators Stafford and Randolph, Chairman and Ranking Minority Member of the Committee on Environment and Public Works.

Because of the analysis we have performed for our published assessment, Technologies and Management Strategies for Hazardous Waste Control, and our ongoing assessment on the Superfund program, we have been able to prepare testimony for the record for the Senate Committee on Environment and Public Works. We have delivered this testimony to that Committee, and are enclosing a copy for you.

If you have further questions, please call me or have your staff call Dr. Audrey Buyrn or Dr. Joel Hirschhorn at 226-2269.

Sincerely,

Jack Gibbons

John Gibbons

Enclosure

STATEMENT OF JOEL S. HIRSCHHORN, SENIOR ASSOCIATE
OFFICE OF TECHNOLOGY ASSESSMENT
FOR THE HEARING RECORD
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE
September 10, 1984

At the request of the Committee's Chairman and Ranking Minority Member, OTA has prepared this statement for the record on issues related to financing a reauthorized Superfund program. This statement is based on work in TECHNOLOGIES AND MANAGEMENT STRATEGIES FOR HAZARDOUS WASTE CONTROL published in 1983, and on our ongoing assessment on uncontrolled hazardous waste sites to be cleaned up under the Superfund program; the latter assessment is expected to be delivered to Congress in early 1985.

SUMMARY

Reauthorizing an extended, expanded, and accelerated Superfund program can be viewed as an interim action, followed by reassessment and restructuring of the program. Key goals of the interim phase could be (a) to develop a long-term strategic plan for Superfund, and (b) to build the technical capabilities and institutional infrastructure, at both Federal and State levels, for cleaning up a large number of sites over several decades. Increasing the size of Superfund need not inflict negative impacts on industry through very high feedstock taxes. The level of funding can be matched to the rate at which many observers think the present program is capable of spending money efficiently; this is perhaps $3.6 billion over three years. A significant portion of this can be generated from a Federal waste-end tax. Twenty States have adopted various forms of a waste-end tax. State experiences have generally been positive, with few problems, except for those arising from the use of unreliable revenue projections. A Federal waste-end tax could be made simple to administer and could generate from $300 million to $1 billion annually over the next several years, before waste reduction efforts reduce the tax base substantially.* Eventually, it is possible that as many as 10,000 sites may require cleanup under Superfund at a cost of $50 billion to $100 billion, or more. If the Superfund program ultimately has to be greatly expanded, neither feedstock nor waste end taxes will be able to fund most of the program.

INTRODUCTION AND BACKGROUND

There are reasons for reauthorizing Superfund now rather than waiting until the funding mechanism expires in 1985, but concerns about too rigid and too large an expanded program are valid. It is useful to think of the Superfund program as evolving through three phases:

(1) In the first period, government reacted to strong public pressures for action and established a large new program to deal with a unique, technically complex, and poorly defined environmental problem.

(2) In the second phase, which would be formed by the present reauthorization, Congress responds to a public call to clean up more sites; the new program might also emphasize the need to refine and improve the system in order to accomplish more effective cleanups.

(3) In the third phase, a mature and informed program would be based on a comprehensive reassessment of the national problem of uncontrolled hazardous waste sites and cost-effective solutions to it.

---

* See Technologies and Management Strategies for Hazardous Waste Control, p. 31, OTA-M-196, March 1983. In 1983, OTA estimated that $400 million dollars per year could be raised by a waste end tax. More recent information and analysis suggest that this estimate is conservative.

In this framework, the current reauthorization for an extended, expanded, and accelerated program is viewed as an interim measure. During the next year or two the information that OTA, other Congressional support agencies, and EPA are gathering will permit Congress to weigh more permanent policies and implementation strategies for the third phase of Superfund. Rather than concentrating exclusively on doing more faster, key goals of the interim phase could be (a) to develop a long-term strategic plan for Superfund, and (b) to build the technical capabilities and institutional infrastructure, at both Federal and State levels, for cleaning up a large number of sites over several decades.

Based on several case studies of Superfund sites (Stringfellow in California, Love Canal in New York, Seymour in Indiana, and Times Beach in Missouri), OTA questions that EPA and the States now have the technical, administrative, and enforcement capabilities to expand and accelerate the program in ways which would assure effective cleanups. It is also unclear whether there are enough well trained and experienced people, such as hydrogeologists, or enough firms, on which EPA is now heavily dependent, to do a good job on the large number of site assessments and cleanups of a greatly expanded program.

Public pressures have prompted EPA to act at more sites, but the question could be asked whether EPA has moved far enough in assuring the long-term effectiveness of cleanup actions, and in making the Superfund program more efficient economically. For example, EPA's contractors are performing large numbers of feasibility studies for evaluating remedial actions. Most of these studies require similar information and analyses, at least some of which should be transferrable from study to study. However feasibility studies remain very expensive, suggesting that contractors and consultants may not be moving up the learning curve as effectively as they might.

All the information which OTA has been gathering as part of its ongoing assessment on Superfund indicates that eventually

Superfund may have to be enlarged more substantially than current estimates. Eventually, Superfund might be a multidecade, multibillion dollar program to cleanup 10,000 or more sites with high cost permanent solutions. This is in contrast to the current EPA estimate of 2,000 sites and cost estimates which, for the most part, are based on partial or ineffective cleanups. These include moving Superfund wastes to RCRA facilities which may themselves become Superfund sites, and cleaning up the surface of sites but postponing dealing with contaminated aquifers.

For example, preliminary OTA data on RCRA Subtitle D solid waste facilities, such as sanitary and municipal landfills, suggests that (a) about 20 percent of NPL sites are Subtitle D facilites, (b) several hundred thousand active and inactive Subtitle D facilities potentially pose a substantial and largely unquantified threat to groundwater quality, (c) from 6,000 to 37,000 of these sites may require cleanup, (d) costs for investigating and assessing these sites alone would range from $2.9 billion to $17 billion, and (e) remedial action costs for these sites might range from $39 billion to $229 billion. The magnitude of this problem will sharpen the issue of the 50 percent match provision for municipally owned and operated facilities, and of the liability of local governments.

In addition, other categories of sites may need cleanup; these include: (a) some currently operating Subtitle C hazardous waste land disposal facilities that because of ineffective RCRA groundwater protection standards and poor compliance are likely to contaminate groundwater; and (b) some of the nearly 20,000 uncontrolled hazardous waste sites in EPA's inventory which do not make it to the NPL. These latter sites are dropped after preliminary assessments and site investigations, or because the current Hazard Ranking Score system gives them a score below an arbitrary value; in many cases, however, they may present threats to human health or the environment similar to those sites which do get placed on the NPL. If these sites do need cleanup, many will not get cleaned up by the States or by private parties, and their cleanup will have to be financed by Superfund. In other cases, recovery of cleanup costs could take years.

EXAMINATION OF AN INTERIM CONGRESSIONAL ACTION

The financial needs of the Superfund program inevitably influence the feasibility and practicality of specific financing mechanisms. For example, the feedstock tax in the initial program was reasonable and expedient. The relatively low rates of taxation that financed the initial $1.6 billion, five year program were not likely to lead to unforeseen or negative economic impacts on the industries most affected. [redacted] The estimates presented by industry of potential economic impacts seem to be reasonable, but it must be acknowledged that such estimates involve many assumptions and are difficult to make for all the feedstocks taxed. It might, however, be possible to increase the revenues obtained from feedstock taxes by 100 to 200 percent without incurring negative impacts on industry.

Furthermore, suggestions to tax intermediate chemicals can lead to a loss in administrative simplicity possessed by the original feedstock approach, and to much greater difficulties in assessing negative impacts on industry. [redacted]

1. See for example "SUPERFUND FINANCING: An Analysis of CERCLA Taxes and Alternative Revenue Approaches," Management Analysis Center, Inc., Los Angeles, March 6, 1984; and testimony of Edwin C. Holmer, Chemical Manufacturers Assoc., House Committee on Ways and Means, July 25, 1984.

There is, however, no irreconcilable conflict between the two goals of increasing the size of the Superfund and avoiding negative impacts on industry from high feedstock taxes. If the level of spending is reduced somewhat and another source of revenue used, then feedstock taxes could be brought back down to levels at which negative impacts on industry were unlikely.

Sources of Revenue

With regard to other sources of revenue, there has been considerable support for using a "waste-end" tax approach, already adopted by 20 States. As a supplement to a feedstock tax, a waste-end tax could generate substantial sums of money during the next several years before offsetting waste reduction efforts take effect. By itself, however, a waste-end tax is not and will not be a practical means to support an enlarged Superfund. The waste-end tax approach is considered in detail in the last section of this analysis. When all the various issues, particularly those about practical implementation, are considered, OTA and others find the waste-end tax worthy of serious consideration as an option that, over the next few years, could alleviate the problems of a greatly increased feedstock tax for an expanded Superfund. During the next several years it appears possible to generate from $300 million to about $1 billion annually from a Federal waste-end tax.

The third major source of funds, which is being used and is under consideration for an expanded role is general Federal tax revenues. The reauthorization already passed by the House raised this contribution from several hundred million dollars to about $2 billion for the second five year program. If OTA is correct about the eventual substantial increase in the size of Superfund - perhaps to levels of $50 to $100 billion or more over several decades - then neither feedstock or waste-end taxes can be the primary financing mechanisms. Therefore, it appears likely that the most practical approach eventually for financing most of Superfund will be the use of general tax revenues. This clearly has significant impacts on broader tax, budget, and fiscal issues for the nation; these considerations are beyond the scope of this statement. However, this possibility underscores the importance of the careful development of detailed long-term strategic plans for a multidecade, greatly expanded, and highly efficient Superfund program.

Level of Funding

In considering how to respond to the legitimate concerns of industry about a greatly increased feedstock tax, the level of funding for an interim reauthorization phase of Superfund should be examined. The key issue here is to reconcile the call for more Superfund cleanups and the practical capabilities of EPA and the States to administer and implement an expanded program in the near-term. As indicated earlier, OTA and others have found considerable evidence suggesting that such capabilities are not yet fully developed. The emergency, reactive character of the initial phase of Superfund has not allowed EPA to concentrate on developing high quality, cost-effective resources and delivery systems for a major national program. Congress could make substantially greater sums of money available for Superfund. But then several questions would arise: (a) would the sums be spent? (b) if they were spent, might resulting cleanup actions be ineffective in the long-term and contribute to greater future cleanup costs? (c) might much of the money not be spent on actual cleanups? The inability of the Superfund program to spend greatly increased sums of money effectively has, in fact, been put forward by EPA itself during this Superfund reauthorization period. Furthermore, if Superfund could turn out to be a multidecade program, then the strong dependence by EPA on outside contractors and consultants for technial expertise deserves examination. There is a steady drain of experienced personnel from EPA to private companies which exacerbates the problems associated with having sufficient technical expertise within EPA to provide effective oversight of assessments and cleanups by contractors, waste generators, and States.

Therefore, Congress may wish to consider an approach for the second phase of Superfund which increases the fund gradually and modestly to permit a closer match between revenues and capabilities. Without substantial restructuring of the Superfund program it is questionable whether annual spending levels for cleanups greater than three times current levels could be spent efficiently.[1] For example, reauthorization might build up spending from current spending levels of about $300 million to $400 million annually, to perhaps $800 million for the first year of reauthorization, $1.2 billion for the second year, and $1.6 billion for the third year, for a total over three years of $3.6 billion. In considering these figures, OTA recognizes that a significant fraction of these increased annual spending levels, probably several hundred million dollars, would be spent on activities not related to cleanups, as provided in the House reauthorization. However, multiple uses of Superfund might delay cleanups by using large amounts of the program's resources. The purpose of suggesting consideration of a three year reauthorization period is to point out the usefullness of having this reauthorization create an interim phase for the Superfund program. This would be a period of adjustment and planning for a larger program which Congress could discuss and debate in considerable detail when much more information, currently being developed by OTA, EPA, and others, becomes available.

A Strategic Plan

A key goal of the interim reauthorization period, therefore, could be for Congress to direct EPA or some independent commission to formulate and present to Congress a long-term strategic plan to implement an enlarged Superfund program. This strategic plan should (a) critically examine EPA's early experiences with its program, (b) consider several scenarios for different sized programs, and (c) examine implementation issues and the means to address them. Issues that might be examined

[1] As of June 30, 1984, Superfund contained an unspent balance of $577,680,000.

include:

o reappraisal of the processes used to select NPL sites and of the number of sites which are likely to require cleanup with use of the Superfund

o the need to more effectively establish cleanup goals and standards

o the implications of temporary or partial cleanups which are likely to lead to future costs, as opposed to permanent cleanups, including cleanups of contaminated aquifers, which appear more expensive in the near term

o the consequences of shortages of technical specialists, within EPA and elsewhere, and of experienced cleanup companies

o the need for oversight by EPA to assure that cleanups performed by States and private parties, voluntarily or under enforcement actions, are effective and consistent with Superfund financed cleanups

o the possibillity of increasing recovery of cleanup costs and improving estimates of recovery from responsible parties

o the effects of grants to States, analogous to the RCRA program, to improve their capabilities to implement Superfund cleanups and carry out their own, directly financed cleanups

o the potential payoffs from increasing R&D and demonstration activities for innovative cleanup technologies which could lead to more cost-effective permanent solutions.

UPDATE ANALYSIS OF THE FEASIBILITY OF A FEDERAL WASTE-END TAX

Ultimately the discussion of the pros and cons of a waste-end tax for Superfund must address how practical it is to implement the tax.

Few disagree that it is more equitable to tax hazardous wastes themselves, and the way they are managed, than to tax feedstocks which are only indirectly the cause of waste generation and (mis)management. The use of either approach recognizes that it is impossible to recover the costs of all cleanups from responsible parties. In fact, even the absolute equity of recovery from responsible parties can be questioned because almost all disposals at Superfund sites took place before there was a generally accepted understanding of the environmental threats from what are now called and regulated as hazardous wastes.

Moreover, proponents of the waste-end tax have not suggested that it could be a sole source of revenue for Superfund. Instead, the logic they present is to take advantage of a waste-end tax before there is a major reduction in the nation's hazardous waste stream, driven by both the RCRA regulatory program's and Superfund's costs to industry. Unlike a feedstock tax, a waste-end tax both generates revenue and can motivate waste generators to move away from land disposal (the chief cause of Superfund sites) to waste treatment and reduction. However, because there are so many factors which can influence industry's decisions on waste management and reduction, there is little hope that the specific effect of a waste-end tax on land disposal versus treatment and reduction can be documented and quantified.

Practicality of a Waste-End Tax

There are two ways to examine the practicality of a waste-end tax. One is to examine the problems theoretically and by analogy with other types of Federal taxes. The other is to assess the experience of some States with waste-end taxes.

Probably the most comprehensive, detailed, and impartial theoretical analysis is the recent testimony of Howard J. Hoffman, entitled "Workability of the Waste-End Tax," before the House Committee on Ways and Means, July 25, 1984. He summed up his analysis by saying that "If it is adopted, I believe it can be devised to be fairly workable." He stated further: "The provisions of the tax entail numerous trade-offs between environmental policy and tax simplicity." OTA finds Mr.

Hoffman's analysis useful to resolve issues and, more importantly, to find ways to address concerns about the practical aspects of a waste-end tax.

The second way of examining the practicality of a waste-end tax is to examine the experiences of those States that have adopted it. Contrary to widely held misperceptions, many States have successfully adopted this approach for revenue generation. Table 1 presents detailed information on 20 States having some form of a waste-end tax.

Table 1A provides a summary for the 20 States to illustrate that certain specific approaches have been favored over others, and to show the range of maximum possible rates of taxation, from less than a dollar per ton to over $70 per ton, but with most States in the range of $5 to $50 per ton. In all cases land disposal is taxed, and in 13 States wastes which are treated may also be taxed. There are higher tax rates for wastes disposed of off the site of the generator in 13 States. The point of taxation is more often the operator of the disposal facility (14 States) than the waste generator (10 States), and in some cases both may be taxpayers (5 States). Having facility operators, which in many cases are also the waste generators, pay the tax greatly reduces the potential number of taxpayers. In all but one case, the States base their taxes on a wet rather than dry basis; this issue is discussed later.

Much has been said about "shortfalls" of State waste-end tax revenues. However, in almost all cases States have not made reliable forecasts or projections of expected revenues. Instead, States have set goals or caps, or have "anticipated" certain revenues. They have not had or in some cases they have not used the information on waste generation and management that is necessary to make reliable projections and estimates. Of course, shortfalls based on valid projections can occur because of a depressed economy, poorly defined terms in a statute, and misreporting, underreporting or nonreporting of waste. However, the chief problem in the experience of the States has been the use of unreliable projections.

Consider several examples which illustrate this problem. Recently the General Accounting Office[1] examined three State experiences. For New York, the GAO report said:

> "The Director of the Division of Solid and Hazardous Waste and the Chief of the Bureau of Hazardous Site Control, both in the Department of Environmental conservation, acknowledged that both the original projection and the revision are overstated and are one of the reasons for the revenue shortage. They have not, however, quantified how much of the shortage can be attributed to the inaccurate projections. ...The Chief believes that some companies may not be reporting the residue for tax purposes. He also believes that some facilities may be claiming that their waste is being recycled when in fact it is not. He does not have any analysis, however, to support these beliefs. ...Regarding the underreporting or nonreporting of waste, the Chief said that while some taxpayers may be trying to avoid the tax using these mean, he does not believe it is a major reason for the shortage. ...Concerning potential illegal disposal of wastes the Chief said that while some illegal disposal of wastes may take place, he does not believe the tax rates...are high enough to cause illegal disposal to avoid the tax."[2]

In January, 1984 OTA performed an analysis of the waste-end tax and a case study of the New York experience. OTA found that New York collected about what it should have collected. Some of the more important observations about that experience are as follows. Despite the fact that wastes treated offsite are taxed at $9/ton, wastes treated onsite are exempt. At the time that revenue projections were made, it was not known how many sites would qualify for this exemption. Nearly 70 percent of all New York hazardous waste generated in 1982 were exempt from the tax.

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[1] General Accounting Office, State Experiences With Taxes on Generators Or Disposers of Hazardous Waste, May 4, 1984.

[2] Concerning the impact of a waste-end tax on illegal disposal, EPA has analyzed seven states with a waste-end tax versus nine states without such a tax and said that: "The analysis did not show any difference in illegal disposal between the states with and those without a waste-end tax." EPA, "Special Analysis of the Implications of a Waste-End Tax and Limited Land Disposal Bans for Illegal Disposal," sent on March 15, 1983 by William D. Ruckelshaus to Congressman James J. Florio.

It should be noted that New York has decided to continue its waste-end tax, and may increase the tax rates.

In GAO's examination of New Hampshire's experience, the report said "The Program Manager for the fund attributed the shortage to an unrealistic projection." A State official "said that the waste generation figures are greatly overstated and do not represent a valid basis for projecting the revenue to be collected by the tax. She explained that in 1977 the definition of hazardous waste was extremely vague and that much of the waste reported by the companies was not hazardous." Furthermore, GAO notes that State officials believe "that underreporting and nonreporting of hazardous waste are not a problem and that the state is collecting about what is expected from the tax."

California has two waste-end taxes. Its generator tax appears to have done well for the two years for which data exist. For wastes generated in 1981,[1] $9.2 million of the $10 million goal was collected, but this resulted, as noted by GAO, from a substantial reduction in a tax rate for one category of waste without a compensation in the rates for other wastes. The tax on wastes generated in 1982 originally resulted in only $7.6 million collected out of the desired $9.4 million ($10 million less $600,000 unspent from the previous year). However, OTA has obtained recent information from California officials. A reassessment on generators was performed to correct for reporting errors, such as wastes reported in gallons or pounds instead of tons. As of August, 1984, $9.3 million had been collected on wastes generated in 1982. Moreover, the 1983 tax has already brought in $9.6 million of the $10 million goal. Therefore, the California generator waste-end tax system appears to be working.

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[1] Tax is assessed on previous year's waste.

The California disposer tax has collected what was anticipated, or more, in all but one of the ten years it has been in effect. For fiscal year 1982-83, $400,000 was not collected out of an anticipated $6.4 million. On this point, GAO notes: "These officials attributed the shortage to the poor economy in the state that year." Moreover, GAO concluded from its analysis of historical data on the relationship between tax rate increases and waste disposal that "the taxable tonnage decrease at the time of the tax rate increase may be attributable to factors other than underreporting or nonreporting, such as poor economic conditions." Furthermore, after the tax rates were increased again in July 1983 (to ease the transition to the landfill ban) from $4.00/ton for all wastes to $18.00/ton for restricted wastes and $6.4/ton for non-restricted wastes, $9.83 million was collected instead of the anticipated $6.51 million (fiscal year 1983-84). Some of the surplus includes late payments from the previous year. (Table 1 indicates changes in the disposer fee which began July 1984.)

Finally, one issue about the impact of a Federal waste-end tax on the States should be noted. The States are concerned that a Federal waste-end tax might pre-empt their own waste-end taxes, which are important sources of revenue for them. But a Federal waste-end tax does not have to pre-empt State taxes. For example, a credit could be given to companies that have paid a tax to a State on the same waste being taxed Federally. The loss to Federal revenues would probably be no more than 10 percent of the total collected through a Federal tax.

Illustrations of a Federal Waste-End Tax

It is often argued that the hazardous waste information base is so incomplete and unreliable as to make estimates of revenue generation little more than guesses. It is true that the nature and quality of the data base can and should influence decisions on how to structure a waste-end tax. OTA has been critical of the national data base on hazardous waste, but we also see that considerable progress has been and continues to be made to improve this data base.[1] However, data inadequacies mean that only a simple waste-end tax structure is practical at this time.

Several possible tax structures, based on EPA data for 1981, are shown for illustration purposes in Tables 2-4. The tax rates chosen have been based on consideration of industry concerns, on what the costs of waste management options are, and on what some States have found effective. These examples show how the degree of hazard of a waste can be used, and how different types of waste management can be taxed. OTA does not suggest that any estimate made today has a high degree of certainty, but this is not unusual for a new Federal tax. Nevertheless, as State experiences have shown (see Table 1), a waste-end tax can produce substantial revenues. Where judgments have been necessary, OTA has used data that reduce revenue estimates in its examples. One way to deal with estimates which might be overly optimistic and with a trend towards increasing waste reduction and shifting away from land disposal is to steadily increase the tax rate; for example, the tax rate for each category might be increased by 10 percent per year.

One of the issues in structuring a Federal waste-end tax is whether or not to tax wastes that are treated in addition to wastes that are land disposed. From a revenue generation

[1] With regard to data and recordkeeping Mr. Hoffman has concluded: "It appears that taxpayers can be required to keep the necessary records without undue burden, and that current recordkeeping requirements under RCRA, with minor revisions, would be adequate for this purpose."

viewpoint, taxing at a low rate wastes that are treated is effective in substantially increasing the amount of money collected.[1] Furthermore, such taxation provides an economic incentive for waste reduction, the most desirable management option.[2] (Note that waste treatment is more desirable than land disposal. Any tax on treated wastes should be low in an absolute sense and low relative to waste management costs to preserve the incentive for treatment over land disposal.) In a sense, taxing treated wastes at a low level is analogous to the original concept of taxing feedstocks at a low level. Equity issues aside, both approaches produce substantial revenues with little likelihood of negative impacts on industry.

OTA concludes that it is possible to structure a simple Federal waste-end tax so that revenues from about $300 million to $1 billion annually could be raised for several years.* A gradual increase in Superfund spending, discussed earlier in this paper, would be consistent with delaying the waste-end tax for one year to develop suitable procedures. It would be possible to generate in the order of $1 billion for the first year of reauthorization with an increased feedstock tax that probably would not be too onerous to industry.

The Dry Versus Wet Weight Issue

Even those in industry who have supported a waste-end tax disagree on the basis for taxation. The issue is dry versus wet

1. The issue that treatment sometimes entails adding nonhazardous materials to a hazardous waste can be resolved by clarifying that nonhazardous material, such as a stabilizing or fixation agent, is not to be taxed.
2. It is OTA's judgment that no use of a surface impoundment should be deemed as a form of waste treatment; such use is land disposal or storage. Wastes that are stored for longer than one year in any way should be taxed, including wastes which are placed in surface impoundments, waste piles, and land treatment facilities, if the waste remains hazardous after one year.

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* See also Technologies and Management Strategies for Hazardous Waste Control, p. 31, OTA-M-196, March 1983.

weight. A very large amount of liquid hazardous waste is mostly water and is placed into injection wells, which are the lowest cost form of land disposal, or into surface impoundments. Those favoring a dry weight basis argue that only the hazardous or toxic portion, not the water, ought to be taxed. They further maintain that with a wet weight basis dry or nearly dry wastes placed into landfills gain an advantage over liquid wastes. That is, companies disposing of aqueous wastes would suffer a disproportionately large share of the total tax burden simply because their liquid wastes weigh so much.

There are three main counter-arguments which favor a wet weight basis for taxation. First, both technically and administratively the world does not use dry weight for any purpose. Wet weights are what people measure and use. To obtain a dry weight means either that some physical test must be performed to determine what the dry weight is, or that some theoretical conversion factor be used. Both approaches present problems. If a test is used, it is likely to give an incorrectly low dry weight because volatile toxic organic substances are easily evaporated with water. The use of conversion factors introduces errors because wastes can vary enough to make a standard conversion factor inaccurate. More generally, it cannot be ignored that using a dry weight basis would create opportunities for underreporting and errors, and enforcement would be more difficult.

Second, the premise behind the position favoring a dry weight basis is that the water is harmless. For water mixed with hazardous waste, this is not quite the case. For both injection well and surface impoundments, greater volumes of liquid wastes increase opportunities for transport and migration into the ground. The water is the carrier of toxic chemicals which, even if present in very dilute quantities, can still pose a substantial health threat. Moreover, the cleanup of any uncontrolled or leaking injection well or surface impoundment becomes more difficult and more expensive as volumes increase.

Third, while it may be agreed that there are many high volume, low hazard aqueous wastes which should be taxed at a relatively low rate, there is a better way to do this. A lower tax on a wet weight basis might be imposed for certain aqueous wastes. The result is essentially the same for the generator or disposal facility; they pay lower taxes.[1] But the problems related to determining and using a dry weight are eliminated. It has sometimes been suggested that imposing a low tax rate on, for example, aqueous wastes which are put into injection wells might lead taxpayers to dilute waste and dispose of it through underground injection. This seems unlikely as the cost of using injection wells is already far below any other alternative. It is not likely that a difference in tax rates would markedly improve an already large economic incentive to use injection wells. It may also be significant that, of the 20 states having a waste end tax, nineteen tax on a wet weight basis. The analysis of Howard Hoffman, referenced above, concluded that a tax based on wet weight would be more administrable than one based on dry weight.

1. Another hybrid approach leads to about the same solution. It is possible to set a tax rate on a wet weight basis and then have an adjusted rate on the basis of a typical percent of solids when the remainder is water. For wastes that are put into injection wells, for example, the solids fraction could be assumed to be 10 percent and the tax rate, therefore, 10 percent of the base weight rate. Provision could be made for taxpayers who wish to demonstrate that there solid fraction is less than the general rate so that they could lower their tax rate. One problem with this approach is that the same argument might be made for surface impoundments which, like injection wells, receive mostly liquid wastes or for landfills which also may receive wastes with some liquid content. However, unlike injection wells, surface impoundments and landfills often receive hazardous wastes with liquids that are not water, such as organic liquids and oils, and present environmental threats themselves. Moreover, surface impoundments have a history of more severe environmental problems than injection wells do. Thus, this approach might best be applied to injection wells only, or a provision made whereby taxpayers could demonstrate that a fraction of their waste is water in order to reduce their tax rate for wastes managed in other ways.

TABLE 1
State Waste-End Tax/Fee Systems

State	Year Initiated	Basis of Tax	Taxpayer	Tax Category	Approximate Per Ton Equivalent	Exemptions/ Limits	Recent Annual Revenue or Estimates (E) Projections (P)
Alabama	1981	Management	Generator	Commercially Landfilled Waste			$ 1-1.5M
				- drum	$9.00/ton		
				- bulk/solid	$5.00/ton		
	1984	Management	Facility Operator	All wastes received by commercial operator	$1.00/ton	Exempt: - wastes treated to non-hazardous; - recycled waste	$250,000(E)
California	1974	Chemical Hazard/ Management	Facility Operator	Disposal fees:		Maximum: - 3,500 tons/yr. for categories a. and d.	$12.03M (P)
				a. State hazardous waste or smelting and beneficiation wastes.	$2.48/ton		
				b. Restricted and extremely hazardous wastes.	$19.84/ton		
				c. Residues from incineration or other approved, controlled chemical or physical treatment.	$.50/ton		
				d. Hazarous wastes that are landfilled, landfarmed, injected or surface impounded.	$9.92/ton		
				e. Surface impounded wastes when the impoundment meets 5 requirements.	$.99/ton		
	1981	Chemical Hazard/ Management	Generator	Land disposal only:		Exempt: - Recycling; - disposal of up to 500 lbs of hazardous or extremely hazardous waste per year; - Waste generated by local agencies or agric. commiss. for control activities.	$9.6M $10M(P)
				a. State hazardous waste or disposal by underground injection, evaporation ponds, landfarming;	$1.94/ton[1]		
				b. Hazardous waste;	$12.91/ton[1]		
				c. Extremely hazardous waste;	$25.82/ton[1]		
				d. Smelting or beneficiation wastes.	$.13/ton[1]		

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[1] 1984 basic tax rate derived from total annual hazardous waste disposal reports, applied to tonnages in 4 categories.

State	Year Initiated	Basis of Tax	Taxpayer	Tax Category	Approximate Per Ton Equivalent	Exemptions/ Limits	Recent Annual Revenue or Estimates (E) Projections (P)
Colorado	1984	Management	Facility Operator	Land Disposal	$2.00/ton	Maximum: - $10,000/year for non-commercial facility	No Projections
				Onsite treatment/storage	$2.00/ton		
Connecticut	1982	Management	Generator	Offsite Management:[2]			
				- gallons	$8.80/ton	Exempt: - Assessments < $25/yr.	$750,000
				- pounds	$10.00/ton		
				- cubic yards	$8.00/ton		
Illinois	1980	Management	Facility Operator	Land disposal excl. well injection	$6.60/ton	Maximum: - $10,000/year for onsite facility	$260,000 $280,000(P)
				Treatment (offsite; not generator-owned)	$2.20/ton	Exempt: - recycling	
				Deep Well Injection	Footnote 3		
Indiana	1982	Management	Facility Operator	Land disposal	$1.50/ton	Maximum: - $25,000/year/company for injection	$500,000- $600,000
Iowa	1985	Management	Facility Operator	Land disposal	$40.00/ton	Exempt: - recycling; - cleanup wastes; - wastewater destined for treatment	No Projections
				Destruction/Treatment	$2.00/ton		
				Offsite Disposal	$10.00/ton		

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[2] Newer tax structure was adopted as of 7/1/84.

[3] Fixed fees in 3 quantity categories: $2,000 - up to 10 million gallons/year (>$.044/ton); $5,000 - 10-50 million gallons/year ($.11-$.022/ton) $9,000 - over 50 million gallons/year (<$.04/ton).

State	Year Initiated	Basis of Tax	Taxpayer	Tax Category	Approximate Per Ton Equivalent	Exemptions/ Limits	Recent Annual Revenue or Estimates (E) Projections (P)
Kansas	1983	Generation	Generator	All Waste	$5.00/ton + $200/facility minimum	Maximum $5,000/year/ facility	$100,000
		Management	Facility Operator	Landfilled waste Other disposal	$2.25/ton $.45/ton		
Kentucky	1980	Management	Generator	Offsite management:			$100,000
				Long-term containment w/o treatment			
				liquid	$11.00/ton		
				solid	$2.50/ton		
				Long-term containment w/treatment; still hazardous			
				liquid	$2.20/ton		
				solid	$2.00/ton		
				Treatment to non-hazardous			
				liquid	$1.10/ton		
				solid	$.50.ton		
				Onsite management: Same categories.	½ charge of offsite categories		
Louisiana	1984	Management	Facility Operator	Wastes land disposal in 1981-6/84	$2.00/dry weight ton[4a]	Exempt: - treatment; - incineration; - recycling	$3,100,000 (3 years cum.)
				Post 6/84: Land disposal of untreated and treated wastes remaining hazardous.			$5,400,000 (E)
				- generator owned property	$5.00/dry weight ton[4b]		
				- not generator owned property	$10.00/dry weight ton[4c]		

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[4] Defined as the nonwater content of the hazardous waste. Equivalent wet weight rates assuming averages of 5% solids for injected wastes to 87% solids for landfilled waste.
a. $.10 - $1.74/ton
b. $.25 - $4.35/ton
c. $.50 - $8.70/ton

State	Year Initiated	Basis of Tax	Taxpayer	Tax Category	Approximate Per Ton Equivalent	Exemptions/ Limits	Recent Annual Revenue or Estimates (E) Projections (P)
Maine	1981	Management	Facility Operator	Offsite:		Maximum $15,000/year/ company	
				Disposal	$33.00/ton		
				Treatment	$19.80/ton		
				Recycling/Reclamation	$6.60/ton		
				Waste oil recycling/reuse/ reclamation	$2.20/ton		
				Onsite:			
				Disposal	$26.40/ton		
				Storage			
				>90 days, <6 months	$3.30/ton		
				Each additional 6 months	$3.30/ton		
				Out-of-State waste	(Twice in-state charges)		
Minnesota	1983	Management	Generator	Long-term containment w/o treatment		Exempt: - recycling; - cleanup wastes; - pre-treatment works	$600,000
				liquid	$70.40/ton		
				solid	$32.00/ton		
				Long-term containment after treatment			
				liquid	$35.20/ton		
				solid	$16.00/ton		
				Destined for treatment in or on the land	$32.00/ton		
				Destined for treatment to non-hazardous material			
				liquid	$17.60/ton		
				solid	$8.00/ton		
Mississippi	1983	Management	Facility Operator	Commercially landfilled waste:			
				drum	$9.00/ton		$0 (no currently operating sites)
				bulk/solid	$5.00/ton		

State	Year Initiated	Basis of Tax	Taxpayer	Tax Category	Approximate Per Ton Equivalent	Exemptions/ Limits	Recent Annual Revenue or Estimates (E) Projections (P)
Missouri	1983	Generation	Generator	All Wastes Landfilled wastes	$1/ton $25/ton	Exempt: - resource recovery; - out-of-state waste	$66,000 $110,000 (P)
		Management	Facility Operator	Landfilled wastes	2% of gross receipts of charges (varies by facility)		
New Hampshire	1981	Generation	Generator	Offsite disposal/treatment Storage of out-of-state waste	$36.60/ton $6.36/ton	Exempt: - generators of <300 kg./quarter; - recycling; Maximum: - $6000/quarter per generator	$254,000 (E)
New York	1982	Management	Generator (or facility operator for out-of-state waste)	Landfill Offsite treatment or land disposal excl. landfill Onsite incineration All waste[6]	$12.00/ton[5a] $9.00/ton[5b] $2.00/ton[5c]	Exempt: - Materials recovery; - cleanup wastes; - assessments of $15/quarter	$3,000,000 $7,000,000 (P)
Ohio	1981	Management	Facility Operator	Commercial land disposal	9% of gross receipts of charges (varies by facility) $1.21 - $8.99/ton[7]		$1,300,000

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[5] Proposed new State Superfund plan includes increasing tax rates:
a. $27.00/ton b. $16.00/ton; offsite incineration unaltered c. $4.50/ton

[6] Program fees, dependent on waste quantities, are assessed on both generators and management facilities.

[7] Ohio will probably shift toward per tonnage charge. These rates were calculated based on 1982 data and the 6% surcharge in effect then for aid in rate determination.

State	Year Initiated	Basis of Tax	Taxpayer	Tax Category	Approximate Per Ton Equivalent	Exemptions/ Limits	Recent Annual Reserve or Estimates (E) Projections (P)
South Carolina	1983	Management	Facility Operator	Landfilled Waste			$300,000
				In-State	$5.00/ton		
				Out-of-State	$7.00/ton		
Tennessee	1983	Management	Generators	Offsite Management	$7.00/ton	Exempt: - recycling; - some treatment; - out-of-state wastes - cleanup wastes	Not Available
		Generation	Generators	All wastes	Footnote 8		
Wisconsin	1977	Management	Facility Operator	Facilities Approved after 1978 with financial responsibility period of:			Not Available
				- 20 years	$.035/ton + $100/yr minimum		
				- 30 years	$.015/ton + $100/yr. minimum		
	1985	Management	Facility Operator	Non-approved Facilities	$.015/ton + base fees		
				All facilities	$.10/ton		

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[8] Fixed fees in 6 quantity categories; lowest category fee is $300 for generation of 1,001 kg to 10,000 kg/year ($272.16-$27.22/ton) and highest category fee is $7,000 for more than 1,000,000 kg/year (<$6.35/ton).

Sources:
1. Interoffice Memorandum from Tony Proffitt to Mr. Bob Bullock, Comptroller of Public Accounts, State of Texas, May 7, 1984.
2. Personal communications with State Officials.

Table 1a

SUMMARY OF STATE WASTE-END TAX/FEE SYSTEMS

State	Treated Wastes Taxed	Higher Rate for Offsite Management	Generators Pay	Facility Operators Pay	Highest Possible Tax Rate[1]
Alabama	X	X	X	X	$10.00/ton
California			X	X	$45.66/ton
Colorado	X			X	$ 2.00/ton
Connecticut	X	X	X		$10.00/ton
Illinois	X	X		X	$ 6.60/ton
Indiana				X	$ 1.50/ton
Iowa	X	X		X	$50.00/ton
Kansas	X	X	X	X	$ 5.00/ton
Kentucky	X	X	X		$11.00/ton
Lousiana	X	X		X	$10.00/ton[2]
Maine	X	X		X	$33.00/ton
Minnesota	X		X		$70.40/ton
Mississippi		X		X	$ 9.00/ton
Missouri	X		X	X	$26.00/ton[3]
New Hampshire	X	X	X		$36.60/ton
New York	X	X	X		$12.00/ton[4]
Ohio		X		X	$ 8.99/ton[5]
South Carolina				X	$ 7.00/ton
Tennessee		X	X		$ 7.00/ton
Wisconsin				X	$ .135/ton

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[1] More than one tax rate may be applied to achieve per ton rate.

[2] Dry weight ton.

[3] 2% charge on disposal receipts not included.

[4] Higher rates may soon be implemented.

[5] Based on 1982 dispoal charges and 6% charge on disposal receipts.

TABLE 2

ILLUSTRATION OF APPLYING A HAZARDOUS WASTE-END TAX BY MANAGEMENT ACTIVITY

Tax Category	Annual Quantity[1] (millions metric tons)	Scenario 1 Tax Rate	Scenario 1 Revenue ($ millions)	Scenario 2 Tax Rate	Scenario 2 Revenue ($ millions)
Well Injected Waste	32.0	$5/tonne	160	$3/tonne	96
All Other[2] Land Disposed Waste	22.4	$50/tonne	1,120	$30/tonne	672
Treated Waste	176.0	$2/tonne	352	$1/tonne	176
Total Revenue			$1,632		$944

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[1] Waste quantities from "National Survey of Hazardous Waste Generators and Treatment, Storage and Disposed Facilities Regulated under RCRA in 1981", prepared for the EPA by Westat, Inc., April 1984.

[2] Landfills, Surface Impoundments, Land Application, etc.

TABLE 3

ILLUSTRATION OF APPLYING A WASTE-END TAX TO LAND DISPOSED WASTE: DEGREE OF HAZARD BASED ON TOXICITY
(waste quantities in millions of metric tons[1])

Tax Category	Tax Rate	Annual Quantity [1] (millions of metric tons)	Revenue ($ millions)
Land Disposal[2] Excl. Well Injection			
Toxic Waste[3]	$50/tonne	19.8	990.0
Non-Toxic Waste[4]	$10 tonne	1.3	13.0
Well Injection			
Toxic Waste[3]	$5/tonne	8.3	41.5
Non-Toxic Waste[4]	$3/tonne	17.7	53.1
Total Revenue			$1,908

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[1] Waste quantities data from "National Survey of Hazardous Waste Generators and Treatment, Storage and Disposed Facilities Regulated under RCRA in 1981", Prepared for the EPA by Westat, Inc., April 1984. Waste quantity considerations:

a. Survey only requested top ten waste stream so quantities based on waste type differ from total disposal quantities.
b. Survey results are subject to statistical reliability assumptions.
c. 4,200,000 tonnes of injected waste and 100,000 tonnes of all other land disposed wastes were assumed to be non-toxic; no hazardous waste code was explicitly assigned in data.
d. Generation, land disposal and waste definitions may have changed since 1981.

[2] Landfills, Surface Impoundments, Land Application, etc.

[3] As defined in 40 CFR 261.24, 261.30 - 2261.33.

[4] As defined in note 1; wastes that are only ignitable, corrosive, and/or reactive.

TABLE 4

ILLUSTRATION OF APPLYING A WASTE-END TAX TO LAND DISPOSED WASTE: DEGREE OF HAZARD BASED ON REPORTABLE QUANTITIES (RQ)
(waste quantities in millions of metric tons[1])

Tax Category	Tax Rate	Scenario 1 Quantity[3a]	Scenario 1 Revenue ($ millions)	Scenario 2 Quantity[3b]	Scenario 2 Revenue ($ millions)
Land Disposal[2] Excl. Well Injection					
RQ = 1	$50/tonne	<.1	1.5	18.0	900.0
RQ > 1	$10/tonne	21.1	211.0	3.0	30.0
Well Injection					
RQ = 1	$5/tonne	0	0	6.1	30.5
RQ > 1	$3/tonne	26.1	78.3	20.0	60.0
Total Revenue			$291		$1,020

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[1] Waste quantities data from "National Survey of Hazardous Waste Generators and Treatment, Storage and Disposed Facilities Regulated under RCRA in 1981", Prepared for the EPA by Westat, Inc., April 1984. Waste quantity considerations:

a. Survey only requested top ten waste stream so quantities based on waste type differ from total disposal quantities.
b. Survey results are subject to statistical reliability assumptions.
c. 4,200,000 tonnes of injected waste and 100,000 tonnes of all other land disposed wastes were assumed to be RQ>1; no hazardous waste code was explicitly assigned in data.
d. Generation, land disposal and waste definitions may have changed since 1981.

[2] Landfills, Surface Impoundments, Land Application, etc.

[3] Reportable quantity designations from the Federal Register/Vol. 48, No. 102/ May 25, 1983/ Proposed Rules.

a. Only those wastes with a proposed reportable quantity of 1.
b. Wastes with a proposed reportable quantity of 1 plus wastes with presumed reportable quantity of 1 pending reassessment.

STATEMENT OF SENATOR DANIEL PATRICK MOYNIHAN

Mr. Chairman, we have before us today an issue of particular interest to me—that is, how to finance an expanded Superfund. Last Thursday, the Senate Committee on Environment and Public Works, on which I serve, voted 17 to 1 to reauthorize the Superfund Program for five years at a funding level of $7.5 billion. Now the Committee on Finance must adopt the appropriate tax or taxes to finance a reauthorized Superfund.

This is not a new issue for me, or for this Committee. In 1980, after considerable debate and discussion, we decided to place a tax on 42 chemical feedstock, crude oil and imported petroleum products. This tax was designed to finance 86% of the $1.6 billion Superfund Trust Fund, with the remaining 14% coming from appropriated revenues.

Our purpose, then, was to impose a tax at the beginning of the chain of commercial production. The chemicals that we tax either are themselves hazardous of basic building blocks for other hazardous substances. There are a limited number of companies manufacturing these chemicals, which makes tax collection a managable task.

Crude oil and imported petroleum products are taxed at less than one cent per barrel—.79 cents per barrel to be precise. The tax on chemical feedstocks ranges from $4.87 per ton for acetylene to 24 cents a ton for nitric acid. The tax began on April 1, 1981 and terminates September 30, 1985.

These tax rates were established in 1980 with the expectation that they would raise $1.376 billion, representing 86% of the total trust fund. By the end of the fiscal year 1985, it is estimated that the Superfund tax will have generated $1.162 billion in revenues.

Overall, the current tax has provided a steady and reliable source of revenue for the Superfund Programs. There will be a shortfall in projected revenues, but not a substantial one—about 16 percent less than we anticipated. Much of this shortfall reflects the unpredicted recession of 1981-82.

Mr. Chairman, as we look to the reauthorization of the Superfund law this year, we must address again the issue of how best to finance program. But this time we need to raise not $1.6 billion, but $7.5 billion over five years.

How do we raise such sums? Do we simply increase the existing tax on chemical feedstocks and petroleum? Or, do we take a different approach? I would suggest we consider a combination of taxes—first, a tax on chemical feedstocks and petroleum: and second, a tax on the disposal and long-term storage of hazardous wastes.

I first indicated my support for a so-called "waste-end" tax in March 1983, when I joined with Senators Hart and Gorton in introducing legislation (S. 860) to expand the Superfund Program and finance this expansion by a tax on hazardous wastes. The tax provisions in S. 860 were designed to provide economic incentives for better hazardous waste management.

There has been much discussion of S. 860 and other waste-end tax proposals. I have concluded that we can design a workable waste-end tax, one that is modest and enforceable. I am working with Senator Bentsen and other members of this committee to develop the specifics of such a proposal. The outlines are simple—a tax would be placed on hazardous waste that is disposed of or stored for a long term at facilities regulated under the Resource Conservation and Recovery Act (RCRA). A tax with modest rates could raise about $1.5 billion over five years.

Such a proposal would serve two purposes. It would provide additional revenue to supplement the feedstock tax, as a means of financing an expanded Superfund. Also, even though the tax rates would be low, some incentive would be provided for better waste management practices.

There is some concern, I know, about the reliability of a waste-end tax as a source of revenue. Several States that have enacted waste-end taxes have collected less revenue than originally projected. First, let me say that I am not proposing that we raise all, or even most, of the Superfund monies from a tax on the disposal and long-term storage of hazardous waste. I suggest only that we raise some $1.5 billion from such a tax—of a $7.5 billion expanded Superfund. Second, we have better data available at the national level and, therefore, are in a better position than the States to project with reasonable accuracy the revenues from such a tax. Finally, we can build on the regulatory system already in place under the Resource Conservation and Recovery Act (RCRA), to enforce the tax and ensure that revenues due are collected.

In sum, Mr. Chairman, we need to raise a substantial amount of revenue, and we need to look to all reasonable sources to do so. I believe a waste-end tax is just such a source.

STATEMENT OF SENATOR BILL BRADLEY

Mr. Chairman, I will try to be brief; we have much to hear, much to decide, and relatively little time.

Mr. Chairman, we are living on top of a toxic time bomb. Today we have a chance to defuse that bomb before it kills us all. Time is running short.

Everyday I hear new stories from my home State of New Jersey and from communities around the country about new toxic waste problems.

Just last week I met with people from New Jersey and other States around this country who live near Superfund sites. One woman described the problems encountered in the attempts to clean up Burnt Fly Bog site in Monmouth and Middlesex counties in New Jersey. This site covers 1,700 acres and threatens drinking water of millions of people in central Jersey. This New Jersey citizen and others like her brought the statistics of 547 Superfund sites down to a gruesomely human level. They live in homes that they can not sell because of the liquid death that is seeping below them. They suffer from chronic diseases. They give birth to stillborn children. This is a mushrooming, deadly problem.

Mr. Chairman, there are some problems in this world that we can do little about. But we can reauthorize Superfund. We can give those people hope and relief. We owe them that.

We must reauthorize Superfund this year so that the fund is not depleted in the middle of next year. If the fund runs dry next year the cleanup at Burnt Fly Bog and the other cleanup sites now in progress will grind to a halt; cleanup at hundreds of other sites will not even begin. We must not allow the momentum so recently developed to be dashed.

Fortunately, Mr. Chairman, the overall goal of our efforts is not in great dispute. The Superfund enjoys broad bipartisan support. While we may be less than unanimous about when the reauthorization should be passed, the precise level of funding, and the exact breakdown of funding sources we can surely agree that the Superfund must and will be reauthorized at a level of funding sufficient to clean up the hazardous waste sites that threaten the health and safety of citizens in every state. The consensus of this overall goal includes the Congress, the chemical industry, the American public and even the President. You will recall, Mr. Chairman, that the President called for Superfund reauthorization in his state of the union address.

When Congress has been provided the opportunity to vote on Superfund this year, the vote has been lopsided. The subcommittee vote in the House was unanimous and the full committee vote there was 38 to 3. On the floor, the full House passed the reauthorization by a ten to one margin, 323 to 33. Here in the Senate the Environment and Public Works Committee reported the bill 14 to 0, despite some stated resistance on the part of several members. When given the opportunity to vote on Superfund the House and Senate members have not given it less than 90 percent of the vote. That is an impressive and enviable record of success, Mr. Chairman.

I am certain that the full Senate as well will have the opportunity to express itself on this issue before we leave on October 5.

This Committee's task, as I see it, is to provide the resources necessary to operate the Superfund program in the manner set forth in the Environment and Public Works Committee bill. This Committee should act so that when, during the next 2 weeks, the full Senate votes on Superfund, it will be voting on a bill produced by the two relevant Senate committees. If this Committee does not act, then the Senate will be voting next week or the week following on something perhaps less desirable to many members of this committee. Clearly we should act and act soon.

Can the Chairman tell us when we will meet to mark this bill up?

As I see it, we in this Committee have two major questions to answer: how much money to raise for the Superfund and from what sources.

As to how much should be raised, the range appears to be between $5 and $10 billion. EPA has said that they would like to spend only $5 billion and that the Environment and Public Works Committee bill would require about $6 billion. On the other end of the scale, the bill Senator Lautenberg and I introduced that is now before the Committee would call for a $10.2 billion program. I am certain that this issue can be resolved.

If not more important, the more interesting question is the source of funds. Should we expand the tax base from the hazardous waste feedstocks that currently provide 88 percent of the revenues? I believe we should.

I believe we should adjust the feedstock to make it less arbitrary and more fair. I believe we should explore the possibilities of broadening the tax base to include hazardous waste itself.

First, while the feedstock tax must remain the principal source of funds for Superfund, we ought to consider making it more rational, more fair. That is, we should attempt to relate the tax rates to the damage caused by that chemical. The more often a chemical is found in Superfund sites, the higher its tax should be; on the other hand, a chemical that is rarely found at Superfund sites ought to bear a smaller tax. We cannot hope to do this with any precision, but data are now available to allow us to take the first steps toward fairness in the feedstock tax.

Second, we ought to explore and perhaps adopt the waste-end tax concept. Like a rationalization of the feedstock tax, this concept would help make Superfund taxes fairer. Taxing chemicals at the "waste end" of the process, in contrast to the "feedstock end" of the process, would begin to get the economic incentives right. A waste-end tax would create incentives to recycle, treat and incinerate waste by creating economic disincentives to landfill, ocean dump, inject or impound wastes.

Finally, we should continue to supplement taxes on chemicals with general revenues.

So, Mr. Chairman, I look forward to these two hearings and to the markup that I hope will immediately follow. Again, my strong preference is to see the Senate vote on a bill approved by a majority—better still, by unanimous vote of this committee. But that is not the only option.

PREPARED STATEMENT OF SENATOR DURENBERGER

Mr. Chairman, I would like to make a few remarks about the political and legislative situation that we face as we begin our work on Superfund.

I am not one who wants to rush through a Superfund bill in this Congress. I would prefer to wait until next year. We are told by some however that reauthorization this year is imperative. Those who take that view are apparently of the belief that a second Reagan administration would not cooperate. That they would refuse to reauthorize. It is this fear which prompts the fast track that we are on.

So we are rushing through a bill now. The Administration and the chemical industry have been resisting that effort. I have heard from countless numbers of lobbyists that it is not necessary to do a bill in the remaining three weeks of this Congress. I have been told by the Administrator at EPA that there are a series of studies on Superfund which will be published this fall that will indicate how the program should be modified to make it more effective and how we can broaden the tax to reduce its burden.

Our rush to reauthorize has produced a very interesting legislative development. The bill reported by the Environment and Public Works Committee last week is relatively clean. There are only one or two amendments that would clog up the Superfund program with new responsibilities or high cost commitments. In terms of the overall level of spending authorized by that bill, it's about as cheap a program as we are likely to see.

What I am suggesting is that the shoe has been put on the other foot. If the Administration is seeking a simple, clean, cheap reauthorization it is the bill that we reported last week. Presuming that we add a reasonable tax title here in the Finance Committee, the traditional interests spoken for by the executive branch and the chemical industry are better served by that bill than any legislation that we are likely to report in the 99th Congress. Given some leisure next year to report a full set of amendments, I am sure that the program that the Environment Committee would report to the Senate would be more extensive and more expensive.

I still prefer to wait until next year. Superfund was not intended to be only a public works program that rearranged waste at a few hundred sites. It was intended to be an omnibus authority to respond to the full range of damage caused by the accidental release of hazardous substances into the human environment. We did not realize that full intention in the law passed in 1980, nor have we made considerable progress in that direction by the bill reported last week. I want an omnibus releases program, so my interests have not been served by the process to this point.

But those who want a limited Superfund have won—perhaps surprisingly and against their own recommendation—a victory of sorts. It will be interesting to see whether in the waining days of this Congress we see the ground shift, with the Administration and chemical industry pushing this bill while others who thought that reauthorization was a necessity urge caution and slow the process with further debate.

Whatever pressures we face in the next few days—and from whatever source—I do hope that we will take the time to craft a careful tax to support the fund. We should look at every alternative to broaden this tax to all those who contribute to the problem and to use the tax to encourage better management of hazardous substances.

Thank you, Mr. Chairman.

The CHAIRMAN. Let me make a brief opening statement. And let me indicate that we are going to have to try to stay on schedule if we intend to complete the first series of hearings this morning. I am going to ask our witnesses to stay within the 5-minute rule.

I would just say at the outset that we begin 2 days of hearings on proposals to extend the Superfund Program for 5 years. While the present program does not expire until next year, with the taxes funding the program terminated on September 30, 1985, we know the House has passed legislation that would extend and greatly expand the program. In addition, last week the Senate Environment Committee ordered reported S. 2892, which would extend the program for 5 years and expand program responsibilities to a cost of roughly $7½ billion over 5 years. The House-passed bill would cost at least $10 billion.

There is a lot of interest in extending Superfund. And as I recall, the last time when we initiated this program, it was this committee that moved very quickly to make certain that would happen. So there is no disagreement on extending the program. There may be some difference on when it should be extended. And while I know of no opposition to the extension, there are some very important questions to answer. And we are not going to be stampeded by any group or any groups unless we can find answers to those questions. It's a serious matter on both sides. And the Environment Committee, in reporting S. 2892, did not specify revenue measures, as they should not have, partly in deference to this committee. And in the letter dated September 17, Chairman Robert Stafford and ranking member Jennings Randolph of that committee indicated there was a broad concensus among members against exclusive reliance on the current feed-stock and crude-oil-taxing mechanisms for supporting an expanded Superfund Program. So, obviously, we want to take into account their views. And we need to focus on that, what the cost of the program will be, and how we are going to share that burden.

So we look forward to what I hope will be a constructive hearing. I know it will be a constructive hearing.

We are very pleased to have—I will call on Senator Bradley in a minute, but first I would like to have come to the table our distinguished colleagues, Senator Lautenberg, and Congressman Jim Florio.

Do you want to introduce these fine witnesses, Bill?

Senator BRADLEY. Mr. Chairman, I have a brief statement and I'm sure the witnesses are known to the committee. I welcome them. They are leaders on this issue.

Mr. Chairman, everyday I hear new stories from communities around this country about new toxic waste problems. Just last week I met with people from New Jersey and other States from around the country who live near Superfund sites. These citizens who have visited and talked with me, in many cases, live in homes that they cannot sell because of the liquid gas that is seeping below them. They suffer from chronic diseases. They give birth to stillborn children. This is a mushrooming, deadly problem.

Mr. Chairman, there are some problems in this world that we can do little about, but we can reauthorize Superfund. We can give those people hope and relief. And we owe them that. We simply must reauthorize Superfund this year.

Fortunately, Mr. Chairman, the overall goal of our efforts is not in great dispute, as you have pointed out. Virtually anytime the Congress has had the opportunity to vote on Superfunds this year, the vote has been lopsided. When given the opportunity to vote on Superfund, the House and Senate Members, who this year have had that opportunity, have not given it less than 90 percent of their vote.

Mr. Chairman, I am certain that the full Senate, as well as the committees with jurisdiction, will have the opportunity to express itself and themselves on this issue before we leave on October 5. This committee's task, as I see it, is to provide the resources to operate the Superfund program embodied in the Environment and Public Works Committee bill. This committee should act so that during the next 2 weeks the full Senate votes on Superfund; it will be voting on a bill produced by the two relevant Senate committees. If this committee does not act, then the Senate will be voting next week or the week following on something perhaps less desirable to many members of this committee.

Clearly, we should act and act soon. As I see it, Mr. Chairman, this committee has two major questions to answer. How much money to raise for the Superfund and from what sources.

As to how much should be raised, the range appears to be somewhere between $5 and $10 billion. If not as important, the more interesting question is the source of the funds. Should we expand the tax base of the hazardous waste feed stocks that currently provide 88 percent of the revenues? I believe we should. I believe we should adjust the feed stock to make it less arbitrary and more fair. I believe we should explore the possibilities of broadening the tax base to include hazardous waste itself.

So we have three alternatives—the feed-stock tax, a waste in tax concept, and general revenues. Mr. Chairman, I look forward to these two hearings and to the markup that I hope will immediately follow. And, again, I express my strong preference to seeing that the Senate vote and approve a Superfund bill in this session before October 5.

The CHAIRMAN. Senator Bentsen.

Senator BENTSEN. Mr. Chairman, the Superfund, I think, is one of the most compelling and emotional issues that we have before the Senate. Since it was first proposed, it has drawn as much intensity of feeling as any environmental issue I have seen. The spector of innocent victims being exposed to waste long abandoned and forgotten has created a sensitivity to the needs of this legislation that few others have obtained.

I think there are few people that would argue that we shouldn't reauthorize the current Superfund legislation. The House has acted on the legislation, and it's now before us.

Last week, the Senate Environmental and Public Works Committee reported out a bill, and I supported that bill. It attempts to deal with critical issues that have now been raised regarding Superfund. It seeks to provide adequate funds to carry out the essential cleanup activities of the Superfund, and generally modifies the present law.

This committee is now addressing the problem of how to raise the money. And at issue is a question that is as complicated as the law itself—equity. When the current law was passed, the revenues it required could be collected without significant economic side effects. As more revenues are required, they must be raised with the full recognition that the pervasive use of hazardous substances in our society compels us to find a more equitable revenue base.

I expect that the bill generated by the Public Works Committee is going to call for an expenditure of something between $5 and $7½ billion. The amount is three to five times more than the existing revenue program. And I don't think those revenues are going to be easily raised.

The current Superfund is largely raised from the feed-stock tax. And the reason it is raised principally from there is because of administrative ease. Not because of equity. As such, it places an economic burden on certain chemicals and certain areas of the United States. For example, there are estimates that 50 percent of the petrochemical-feed-stock portion of the tax is raised from plants in Texas. This industry suffered considerably from the recession over the past few years. Some of the highest unemployment areas in my State are in the Beaumont, Port Arthur, Orange area where it is more than twice the national average, and where you have a heavy petrochemical industry.

When I used to go into that area, that was one of the booming areas of my State. Now it's one of the depressed areas.

I fully expect that the domestic petrochemical industry is going to continue to be faced with significant problems for several years. And many of those problems are going to be coming from production that is taking place in the Middle East, things that are happening in Saudi Arabia and Kuwait, or from our neighbors on the north and the south, Canada and Mexico, where they have substantial production of oil and natural gas.

Any continuing feedstock tax, and particularly increasing that tax, has to recognize those realities. We should not have a system that inappropriately encourages the production of those chemicals outside of the United States. The result would cost us both jobs and revenues.

Consequently, I expect to propose modifications to the feedstock tax that would expand the chemicals subject to a tax in an effort to both broaden its impact, the original expectation of the current tax, and to diminish incentives to move production outside the limits of the United States.

A second option which I'm working on, and working on with Senator Moynihan, is a waste end tax. The underlying issue associated with waste end tax is whether it will be a successful source of revenue, whether it will be stable and whether it could be monitored. I believe that a carefully crafted proposal can provide a reliable revenue source. More importantly, I am convinced that even an expanded feedstock tax cannot provide all of the funds that are necessary for superfund in an equitable manner. Therefore, a component of it should be a waste end tax because it represents a reasonable limited term option for additional revenue.

I was talking to some people the other night, last night, in fact, about how this is going to be accomplished. When we were talking about feedstocks, he said the problem that we have is when we go to a toxic waste dump site. He said we don't just run into major chemical, petrochemical, companies, but he said we run into IBM; we run into Kodak; we run into companies you never expect were contributing to those kinds of problems.

For those who question the advisability of a waste-end tax, I believe it only points to a conclusion that the Superfund tax bases have to be broadened. This reauthorization of Superfund comes at a time when the Superfund cleanup program is maturing to a level where it will be constrained by a variety of management limitations. In 5 years, many of these limitations are going to be eliminated, and a much larger program will likely be achievable. Neither a feedstock oriented tax or waste end tax will be able to provide a revenue base that will adequately fund the future program without significant economic implications.

In that sense, this bill must be viewed as a transition bill, a movement from a reliance on a narrow tax base to a broad based tax. The manufacture and use of hazardous substances is so widespread in our society that the Superfund must appropriately reflect that reality. And Congress has to turn its attention to finding an alternative to the current leading Superfund revenue options. I think it will be appropriate to begin that process in this legislation.

Mr. Chairman, we have got a tough job on our hands trying to do it. But let me give you an example of what happens under the House bill. Take a product like ethylene. One-half of ethylene goes into polyethylene. That goes into making up liners for waste dumps. It goes into making up polyethylene bags, a benign product. And yet you see that tax raised from $4.87 a ton to $13.78, substantially more than double. Those are the kinds of problems that we are facing, and that's why it is so critical that we try to broaden this tax.

Thank you, Mr. Chairman.

The **Chairman**. Senator Lautenberg, you have been here since before 10 so we don't want to keep you longer. We appreciate you being here. We appreciate Congressman Florio being here. And we hope we can do some business.

STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator **Lautenberg**. Mr. Chairman, and members of the committee, I am pleased to appear before you today to urge Finance Committee action on Superfund legislation this year.

There isn't a witness whom you will hear from today or on Friday who will deny the imperative need to provide funds for the cleanup of thousands of abandoned hazardous waste sites found in every State across our Nation. However, the real issue before us today is whether the Senate and the Congress can act on Superfund this session.

The Finance Committee plays a pivotal role in this process. On August 10, the House of Representatives adopted H.R. 5640 by an overwhelming vote of 323 to 33. Last week, the Environment and

Public Works Committee reported S. 2892 by a vote of 17 to 1. This bill makes a number of important programmatic changes in the current law and calls for $7½ billion in revenues to fund Superfund over the next 5 years.

It's critical for the Finance Committee to make a recommendation on taxing titles if the full Senate is to benefit from its expertise before considering this legislation.

Mr. Chairman, what drives the need for congressional action on Superfund this year?

The first responsibility of Government is to protect the health and welfare of the public. And we have been failing at this task in some ways. Fifteen million American are exposed to the most dangerous abandoned hazardous waste sites. The drinking water of half of these citizens is threatened by contamination. We owe it to these people to move at the fastest pace possible and to respond to their needs much more effectively.

Members of the committee, I am sure, are familiar with the numbers, but it's worth repeating. EPA estimates that 6,000 sites will need a response from Superfund. Five hundred and forty-six of those sites are currently on the national priority list. Only six sites have been completely cleaned up. EPA plans to add another 250 sites to the list in October. An additional 600 to 1,400 sites will be added soon thereafter. We are adding Superfund sites to the list at a far greater pace than we are cleaning them up.

Only recently has EPA even developed a Superfund management plan, despite the 4 years the program has been on the books. The States have only just begun to establish a predictable working relationship with EPA to implement Superfund programs.

EPA recognizes that the pace of the program must pick up. But how do they propose to do this?

Lacking congressional reauthorization this year, EPA proposes to completely deplete the fund during fiscal year 1985. This would mean the obligation of the $640 million remaining in the fund. In fiscal year 1986, which starts in October of next year, EPA proposes to increase its expenditures by 65 percent to $1 billion.

Mr. Chairman, I would submit that unless the Congress reauthorizes Superfund this year, this is a recipe for administrative disaster.

The sheer magnitude of the task, and the need for EPA and the States to make the managerial and financial commitments necessary to operate the Superfund program without a loss of continuity, demands action from the Congress.

Without reauthorization this year, extending the life of the program and clarifying future funding levels and programmatic responsibilities, EPA will be unable to make the commitments necessary to implement the program during fiscal year 1986 and beyond. And the States will be faced with an untenable degree of uncertainty in planning to undertake their responsibilities. This will slow down or halt the hiring of sufficiently trained personnel to manage an expanded program. It will complicate efforts to raise the local funding necessary to match Federal expenditures and assure EPA States can meet their operation and maintenance expenses.

The EPA and the States need adequate lead time and direction if they are to avoid disruption in the program.

No executive could afford to run a company this way.

We should not wait until the 11th hour and try to run a Federal program this way.

If Superfund is not renewed and expanded this year, it is clear that my State, New Jersey, will experience a shortfall and disruption in its program. We have the unfortunate distinction of having more Superfund sites than any State in the Nation. We have 85 sites on the Superfund list, and another 15 are expected to be added in October.

New Jersey's management plan for fiscal year 1985 calls for action on 69 separate major sites. It involves 150 design, engineering, or construction projects at a cost of $108 million in Federal Superfund dollars. In 1986, $123 million will be needed to keep the program moving. The commissioner of the New Jersey Department of Environmental Protection has stated that EPA will be unable to make the necessary commitments, sign the necessary contracts, and permit New Jersey to move ahead with its program if Superfund is not renewed this year. The National Governor's Association has stated time and time again that this will happen in States all across the country.

We must give the States and EPA the lead time and resources they need to gear up for an expansion in fiscal year 1986. We must let those exposed to hazardous waste sites know that the Congress hears their call for action.

To raise the necessary revenues, the bill reported from the Environment and Public Works Committee last week included a list of substances currently taxed by Superfund, but does not set specific rates.

In addition to taxing these feedstocks, the committee also suggests that the tax base should be expanded to include new revenue sources. I share the view of the committee that you seriously consider a more broadly based tax to include appropriate producers and consumers of chemicals and to minimize competitive disadvantages that may be experienced by domestic companies. General revenues must play a role as well.

Mr. Chairman, time is of the essence. We have a small window of opportunity now to provide the leadership the public is demanding.

And I thank you for the opportunity to testify before the committee this morning.

The CHAIRMAN. Thank you.

[The prepared written statement of Senator Lautenberg follows:]

TESTIMONY OF SENATOR FRANK R. LAUTENBERG
SENATE FINANCE COMMITTEE
SEPTEMBER 19, 1984

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It is critical for the Finance Committee to make a recommendation on taxing titles if the full Senate is to benefit from its expertise before considering this legislation.

Mr. Chairman, what drives the need for Congressional action on Superfund this year?

The first responsibility of government is to protect the health and welfare of the public. We have been failing at this task. Fifteen million Americans are exposed to 1,000 of the most dangerous abandoned hazardous waste sites. The drinking water of half of these citizens is threatened by contamination. We owe it to these citizens to move at the fastest pace possible and respond to their needs much more effectively.

Members of the Committee, I am sure, are familiar with the numbers.

. EPA estimates that 6,000 sites will need a response from the Superfund. 546 sites are currently on the National Priority List. Only six have been completely cleaned up. EPA plans to add another 250 sites to the list in October. An additional 600 to 1,400 sites will be added soon thereafter. We are adding Superfund sites to the list at a far greater pace than we are cleaning them up.

Only recently has EPA even developed a Superfund management plan, despite the four years the program has been on the books. The states have only just begun to establish a predictable, working relationship with EPA to implement Superfund programs.

EPA recognizes that the pace of the program must pick up. But how do they propose to do this?

Lacking Congressional reauthorization this year, EPA proposes to completely deplete the Fund during FY85. This would mean the obligation of the $640 million remaining in the Fund. In FY86, which starts in October of next year, EPA proposes to increase its expenditures by 65 percent to $1 billion.

Mr. Chairman, I would submit that unless the Congress reauthorizes Superfund this year, this is a recipe for administrative disaster.

The sheer magnitude of the task, and the need for EPA and the states to make the managerial and financial commitments necessary to operate the Superfund program without a loss of continuity demands action from the Congress.

WITHOUT REAUTHORIZATION THIS YEAR, EXTENDING THE LIFE OF THE PROGRAM AND CLARIFYING FUTURE FUNDING LEVELS AND PROGRAMMATIC RESPONSIBILITIES, EPA WILL BE UNABLE TO MAKE THE COMMITMENTS NECESSARY TO IMPLEMENT THE PROGRAM DURING FY86 AND BEYOND. AND THE STATES WILL BE FACED WITH AN UNTENABLE DEGREE OF UNCERTAINTY IN PLANNING TO UNDERTAKE THEIR RESPONSIBILITIES. THIS WILL SLOW DOWN OR HALT THE HIRING OF SUFFICIENT PERSONNEL TO MANAGE AN EXPANDED PROGRAM. IT WILL COMPLICATE EFFORTS TO RAISE THE LOCAL FUNDING NECESSARY TO MATCH FEDERAL EXPENDITURES AND ASSURE EPA STATES CAN MEET THEIR OPERATION AND MAINTENANCE EXPENSES.

THE EPA AND THE STATES NEED ADEQUATE LEAD TIME AND DIRECTION IF THEY ARE TO AVOID DISRUPTION IN THE PROGRAM.

NO EXECUTIVE COULD AFFORD TO RUN A COMPANY THIS WAY.

WE SHOULD NOT WAIT UNTIL THE 11TH HOUR AND TRY TO RUN A FEDERAL PROGRAM THIS WAY.

If Superfund is not renewed and expanded this year, it is clear that my state will experience a shortfall and disruption in its program. New Jersey has the unfortunate distinction of having more Superfund sites than any state in the Nation. We have 85 sites on the Superfund list. Another 15 are expected to be added in October.

New Jersey's management plan for Fiscal Year 1985 calls for action on 69 separate major sites. It involved 150 design, engineering, or construction projects at a cost of $108 million in federal Superfund dollars. In 1986, $123 million will be needed to keep this program moving. The Commissioner of the New Jersey Department of Environmental Protection has stated that EPA will be unable to make the necessary commitments, sign the necessary contracts, and permit New Jersey to move ahead with its program if Superfund is not renewed this year. The National Governor's Association has stated time and time again that this will happen in states all across the country

We must give the states and EPA the lead time and resources they need to gear up for an expansion in FY86. We must let those exposed to hazardous waste sites know that the Congress hears their call for action.

TO RAISE THE NECESSARY REVENUES, THE BILL REPORTED FROM THE ENVIRONMENT AND PUBLIC WORKS COMMITTEE LAST WEEK INCLUDED A LIST OF SUBSTANCES CURRENTLY TAXED BY SUPERFUND, BUT DOES NOT SET SPECIFIC RATES.

IN ADDITION TO TAXING THESE FEEDSTOCKS, THE COMMITTEE ALSO SUGGESTS THAT THE TAX BASE SHOULD BE EXPANDED TO INCLUDE NEW REVENUE SOURCES. I SHARE THE VIEW OF THE COMMITTEE THAT YOU SERIOUSLY CONSIDER A MORE BROADLY BASED TAX TO INCLUDE APPROPRIATE PRODUCERS AND CONSUMERS OF CHEMICALS AND TO MINIMIZE COMPETITIVE DISADVANTAGES THAT MAY BE EXPERIENCED BY DOMESTIC COMPANIES. GENERAL REVENUES MUST PLAY A ROLE AS WELL.

MR. CHAIRMAN, TIME IS OF THE ESSENCE. WE HAVE A SMALL WINDOW OF OPPORTUNITY NOW TO PROVIDE THE LEADERSHIP THE PUBLIC IS DEMANDING.

THANK YOU.

STATEMENT OF HON. JAMES J. FLORIO, U.S. REPRESENTATIVE FROM THE STATE OF NEW JERSEY

Mr. FLORIO. Thank you very much. I appreciate the opportunity to testify before you. I will skim through my testimony and try not to repeat any of the points that my colleague from New Jersey made. And I think it's significant to know that the more active participants in this process do come from our State because we have a very serious problem in our State. More hazardous wate dump sites on the national priority list than any other State in the Union, so it's not an academic matter with us.

I wanted to express my appreciation to talk about what I regard as really the most important environmental issue that we, in the Congress, will be facing not just this year but really for the balance of the century, I suspect. I think all know that the current Superfund law has been totally inadequate to even begin to address the problem. It's a 5-year bill, $1.6 billion. And, in fact, it has effectively cleaned up six sites out of what EPA estimates is 22,000 across the country. So it's clear that that is not going to be sufficient financing of that magnitude.

In large measure, it's because we have had new information that has been brought to our attention, and the numbers that the gentleman from New Jersey indicated are very correct. That it is anticipated that the priorities list will go from 546 up to as many as 7,000 over the next number of years. The priorities list means that a site on that list is an imminent and substantial hazard to people's health; to the environment. So we are talking about serious public health concerns as well.

EPA itself has estimated that to address the national priorities list itself—that is exclusively—in cleanup remedial measures is going to take from $8 to $16 billion over the next 5 years. Other organizations maintain that that's an extremely conservative estimate. GAO says that it is going to take $26 billion. OTA says that it's $40 billion. The National Governor's Association says between $9 and $12 billion. The environmental community says in excess of $20 billion.

So CMA itself—CMA which has not always been enthusiastic about financing this proposal—has said that it is going to take $3.4 billion over the next 5 years. They are a group that acknowledges, however, that it will take some two decades to clean up the national priorities list sites at that level of spending.

Suffice it to say that everyone agrees that far in excess of $1.6 billion for the next 5 years is going to be required.

The legislation that you are considering today—and that is that that came out of the other Senate committee—provides the $7.5 billion. The House bill passed by the House overwhelmingly—323 to 33—provided for $10.2 billion.

I think it's interesting to note that the bill that came out of my committee, the Energy and Commerce Committee, which was referred to your counterpart committee in the House, the Ways and Means Committee, was increased by that fiscally conservative committee from $9.1, I believe, up to $10.1 billion. And that was as a result of their examination of what the issues were.

The numbers that we are talking about go exclusively to address the question of cleanup. We are not talking about the other responsibilities in the bill. That is emergency remedial measures. Those are add-ons so that when we talk about the numbers that we are talking about, we are talking about the minimal package of cleanup rather than other responsibilities that are already in the law.

I wanted to just talk and address, finally, two points. One is the source of revenue. And I certainly respect the responsibilities of this committee to address the equity of the current system. The feedstock system that we have in the law was based upon the premise that the chemical feedstocks are the building blocks of all of the waste that we are dealing with and cleaning up. And when reference was made to the IBM's and the General Motors, well, they generate waste, but they generate waste off of those feedstocks they purchase from the people that are paying the tax. So the economic realities are such that they will be paying the cost for increased feedstocks.

Likewise, I would say that our bill provides for a large reliance upon feedstocks, but also a general appropriation, increasing general appropriations from about 12 percent in the existing law to 23 percent in the proposal that came out of the Senate or out of the House.

The other point I would like to make is that under the House bill, each covered chemical and feedstock substance is taxed at an average of 3 percent of the sales price. This is up from 2 percent average of the sales price from 4 years ago. Not a great increase on an average. And I certainly respect the ability of this committee to adjust specifics. And the gentleman from Texas made specific reference to a particular feedstock. I have no difficulty with modifications as long as the revenue projections are appropriately met.

Another point that I think has to be addressed is that imported feedstocks are taxed at the exact same level as the domestic feedstocks, so arguments that there is somehow a competitive disadvantage that is being built into the law really don't stand up to scrutiny.

Likewise, exports—that is, feedstock exports—are not taxed so we are not providing a competitive disadvantage to our industry in that regard.

The last point I will make—and you will be hearing from EPA. I suspect that they have not got the capability of dealing with this problem this year, and, therefore, we ought to wait until next year. My only response to that is that as I have indicated, and all the other witnesses will indicate, there is going to be a need for an extended and expanded Superfund. EPA on October 1, 1985 will be required to gear up for a much bigger and more comprehensive program. And the question, then, is do we wait until September 1985 to tell them what the exact dimension of that program is going to be so that in a space of a few days they are going to be required to turn around and try to gear up for it, or do we pass the bill this year, providing for advance notice so that the moneys can be used in a cost effective way, giving EPA the time to be able to utilize those moneys in a sensible way.

I think that's the issue. The issue is do we have good planning at EPA? Do we give them the advance notice as to what they are going to be charged under the law with doing? Or do we wait until next year and hope that something gets done before they are required to go into operation under a new system at the beginning of the fiscal year.

Thank you.

[The prepared written statement of Congressman Florio follows:]

TESTIMONY OF HON. JAMES J. FLORIO, CHAIRMAN, HOUSE SUBCOMMITTEE ON COMMERCE, TRANSPORTATION AND TOURISM BEFORE THE COMMITTEE ON FINANCE, U.S. SENATE REGARDING H.R. 5640, SEPTEMBER 19, 1984

Mr. Chairman and members of the Committee, I want to thank you for the opportunity to appear before you today as you begin your consideration of legislation to reauthorize the Superfund program. In my view, it is absolutely vital that we reauthorize this important program this year, and I am hopeful that this Committee's expeditious consideration of the legislation reported by the Senate Environment and Public Works Committee will permit you to seek final passage and a conference with the House before the Congress adjourns in early October.

As many will remember, the current Superfund law established a $1.6 billion fund for an initial five-year period. The President authorized the Environmental Protection Agency to begin the work of assessing the thousands of abandoned hazardous waste sites across the country, identifying the worst sites eligible for federal cleanup funds, and launching cleanup of those so designated. Revenues for the cleanup effort were generated by taxes on the chemical industry, plus a 12.5 percent appropriation from general federal tax revenues.

Although many of us who worked on the original legislation suspected that a second installment of the program would be necessary, few imagined the actual scope of the additional funding needs which face us today. EPA's gross mismanagement of the program in its early years, partnered with much improved data concerning the number and nature of the sites which must be cleaned up, lead any objective observer to the irrevocable conclusion that significantly expanded funding levels are crucial if we are to accomplish the goals we established back in 1980.

Consider the following basic Superfund statistics:

- To date, EPA has managed to clean up only six sites, although it has already placed 546 of the nation's worst sites on the National Priorities List which defines eligibility for federal cleanup funds.

- EPA expects to place at least 2,200 sites on the National Priorities List someday. Even this apparently large number represents only a fraction of the 17,000-22,000 sites which exist across the country and state officials dispute EPA's estimates, telling us instead that the National Priorities List will swell to some 7,000 sites over the long-term.

- The current $1.6 billion Superfund will be enough to cleanup at most 170 sites on the 546 now listed. EPA says that cleanup costs for the rest of the sites it expects to place on the National Priorities List will run -- at a minimum -- between $8 and $16 billion.

- The agency's estimates are considered extremely conservative by both the General Accounting Office and the Office of Technology Assessment. GAO tells us that ultimate cleanup costs could run as high as $26 billion and OTA predicts such costs could total $40 billion.

- Based on all these facts and figures, state organizations (including the National Governors' Association) urge us to commit between $9 and 12 billion for five more years of a reauthorized program. The environmental community urges us to commit $20 billion over the next five-year period. Even the Chemical Manufacturers' Association has endorsed new funding levels of $3.4 billion, although the group acknowledges that cleanup of listed sites could take close to two decades at those levels.

The legislation you are considering today establishes funding levels for a reauthorized Superfund program of $7.5 billion over the next five years. The bill adopted by the House on August 10, 1984, by a vote of 323 to 33 would establish a funding level of $10.1 billion over the same period.

As you evaluate the legislation, and the funding levels which are proposed, please keep in mind that Superfund must support several essential activities in addition to basic cleanup and none of these essential activities were included in the cost estimates I mentioned earlier. For example, the fund must support the administration of the basic Superfund program. The fund is also used to pay for emergency relief and removal actions in cases where waste site contamination and removal actions is threatening the health of citizens in surrounding communities. Finally, the states have implored us to offer them some relief in the important area of long-term operation and maintenance of finished sites. Under current law, they must support all of these costs, but under the legislation you are considering they would be given assistance with operation and maintenance costs during the first few years after a site is cleaned up.

When it was faced with all of these cost estimates and evidence concerning program needs, your sister Committee on the House side determined to raise the funding levels of the legislation I had originally introduced from $9.5 billion to $10.1 billion. Its sound and wise decision was based on an exercise of essentially conservative fiscal judgment: while the taxes which support the program now may hurt, we have no choice but to get on with the job as rapidly as possible before the mounting costs of this devastating environmental pollution climb out of our reach.

The final bill approved by the House supports the program through two basic sources:

One: A continuation of the current feedstock tax system, with rate adjustments and an expansion of the tax base sufficient to generate $7.8 billion, or 77 percent of the total fund, over the next five years; and

Two: An authorized appropriation from general tax revenues totalling $2.3 billion, or 23 percent of the fund, over the same period.

Under the House bill, each covered chemical and metal feedstock substance is taxed an average of three percent of the sales price. All individual tax rates are capped at $30/ton so that a substance's relatively high sales price does not produce an inordinately high tax assessment. Imported feedstocks are taxed at the same levels. Exports are not taxed.

The funding mechanism developed by the Ways and Means Committee represents a sound and workable compromise regarding all of the concerns and interests represented here today. While I recognize that you will soon hear many other funding proposals put forward and that we must all retain flexibility to evaluate such proposals carefully, I urge you to give complete consideration to the excellent tax system developed by your colleagues.

In the few minutes I have remaining, I would like to address two final issues which have played a major role in the Superfund reauthorization debate: the economic impact of increased taxes and the need to reauthorize the program this year.

As this Committee proceeds to consider this important legislation, you will be faced with a battery of dire predictions concerning the impact of additional taxes on the economic health of the chemical industry. You will be told that the funding levels and tax rates contained in the legislation will produce economic disaster for key segments of the industry and that such tax revenues -- even if collected -- will only be wasted since EPA cannot possibly spend such funds fast enough.

As you consider all these dire predictions, I urge you to probe carefully -- as I have -- for the data which backs them up. I think you will find that those who advocate these disastrous scenarios have yet to prepare a single convincing and comprehensive analysis to support their predictions. Indeed, the facts available to us suggest the opposite conclusion.

For example, the 1983 report prepared by the Joint Tax Committee on the effective tax rates for large American corporations reveals that the effective corporate tax rate for the chemical industry as a whole is minus seventeen percent. A temporary recession in the early years of this Administration has been overcome and many major companies are showing record profits for the last several quarters.

Many opponents of the House legislation have also pointed out that a dozen major companies bear the bulk of the tax burden. I have attached a chart to my testimony containing two major indicators of financial health for these corporations: net income after taxes and return on stockholder equity. You will see that these twelve large corporations had net after tax incomes totalling $16 billion in 1983, and a return on stockholder equity averaging over 10 percent.

As for the argument that EPA cannot spend increased funding fast enough, I would be the first to agree that the current program must be fundamentally restructured in order to absorb the funding levels set in the legislation. In fact, the costs of failing to restructure the program so that accelerated cleanup can be accomplished are nearly unthinkable. At the current cleanup rate of six sites every four years, it could take 1,500 years to finish cleanup at the minimal number of 2,200 sites EPA expects to place on the National Priorities List someday. Even the expanded levels of funding proposed by the chemical industry would produce decades of delay in the cleanup effort. Each year of such delay drastically compounds both the environmental damage and human health effects of waste site contamination; the truth is that the longer we wait, the larger and more crushing the ultimate price tag we must eventually face.

Unfortunately, there are many involved in the reauthorization process who would urge you to do just that and defer the inevitable decision to reauthorize the program until next year. You will hear today from EPA and industry representatives that there is no need to rush to judgment and that any final action by this Committee should be deferred until at least next year.

Once again, the costs of such delay are simply unacceptable. Today, four years after Superfund was created, we find ourselves in the tragic position of virtually beginning the program all over again. The planning necessary to accomplish its revitalization should have begun months ago. Unless the Congress acts decisively this year, months if not years of the second reauthorization period will be lost as the agency scrambles to gear up for its new responsibilities. The simple fact is that the current Superfund will be completely depleted by this time Next year. The House bill would start new taxes this coming January, so that no break in cleanup need occur.

There is no environmental problem more important to the American people than the thousands of abandoned waste sites across the land. The facts supporting the need to extend and expand Superfund are irrefutable. Our only possible course -- the only responsible course -- is to act, and act decisively, to ensure the future of the program as soon as possible.

Mr. Chairman, that completes my prepared testimony and I would be happy to answer any questions you may have.

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TWO MEASURES OF PROFITS FOR 12 LARGE CORPORATIONS PRODUCING CHEMICALS

Bernard Gelb
Analyst in Industry Economics
Economics Division
September 17, 1984

TWO MEASURES OF PROFITS FOR 12 LARGE CORPORATIONS PRODUCING CHEMICALS

Company	Net Income After Taxes ($ millions)					Return on Stockholders Equity (%)				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Atlantic Richfield	1,166	1,651	1,671	1,676	1,548	19.1	22.2	19.3	17.0	14.2
Dow Chemical	784	805	564	399	334	21.5	19.3	12.1	8.0	6.6
du Pont	965	744	1,081	894	1,127	18.4	12.8	13.7	8.4	10.1
Exxon	4,295	5,350	4,826	4,186	4,978	19.0	20.1	17.4	14.7	16.9
Gulf & Western a/	128	156	260	165	260	8.8	9.9	13.5	7.6	12.8
Mobil	2,007	2,813	2,433	1,213	1,503	20.5	23.9	17.6	8.5	10.8
Phillips Petroleum	891	1,070	879	646	721	20.9	21.7	16.0	11.2	11.7
Shell Oil	1,126	1,542	1,701	1,605	1,633	18.4	22.0	21.0	17.4	15.9
Standard Oil of Indiana	1,507	1,915	1,922	1,826	1,868	19.4	21.6	19.2	16.5	15.7
Texaco	1,759	2,642	2,310	1,281	1,233	17.7	19.7	17.6	9.2	8.6
Union Carbide	556	890	649	310	79	14.5	15.3	12.9	6.0	1.6
Unocal	501	647	791	804	626	18.0	20.1	20.8	18.2	12.6

a/ Profits data pertain to earnings from continuing operations.

Source: Annual reports of the respective companies.

The CHAIRMAN. Thank you very much.

Senator Long.

Senator LONG. I'll wait until I've heard all the witnesses.

The CHAIRMAN. Senator Roth.

Senator ROTH. No questions, Mr. Chairman. I thank them for their appearance. I commend Congressman Florio and Senator Lautenberg for their leadership in this area.

The CHAIRMAN. Senator Bradley.

Senator BRADLEY. Mr. Chairman, I think that the Congressman and my colleague in the Senate have put the issue very well, and not only in terms of the relevance of it to our State, but to the entire country. And I hope that we will act on this to get a bill. And I thank them for their contribution.

The CHAIRMAN. Senator Chafee, any questions?

Senator CHAFEE. No questions, Mr. Chairman.

The CHAIRMAN. Senator Durenberger.

Senator DURENBERGER. Mr. Chairman, I just want to in his presence and before they leave especially compliment the junior Senator, despite his apparent advantage over the senior Senator from New Jersey, for the way that he has taken on this issue. Several of us on this committee had an opportunity to watch him work as a brand new, literally just a few months, member of the Environment and Public Works Committee. And I think it is appropriate in light of his testimony and his commitment to indicate the appreciation that a lot of us bring from that committee to this committee for the work that Frank has done. And, obviously, we know Jim has been at it a longer period of time. But I especially wanted to say that on behalf of one of our newer colleagues who has really done a superb job in a most difficult policy issue.

Senator CHAFEE. Mr. Chairman, I would like to second that and also to say that both the gentlemen are working in another area which is a related area to this. And that is on the RCRA. Both are members of the conference committee where we are dealing with another facet of this. I would like to compliment them for their work on and the continuing work which we will have because we are still in that conference. And we look for something successful coming out of that. Thank you.

The CHAIRMAN. Well, we thank you very much for being here this morning. As I indicated at the outset, there are some serious questions that must be answered. We know the House acted before the Senate and we are going to do the best we can. We are going to have another hearing on Friday. We will see what we can work out between now and October 5.

Senator LAUTENBERG. Thank you, Mr. Chairman. I leave with only one question. Do you always treat the witnesses so nicely when you hold hearings in this committee?

The CHAIRMAN. We are generally fairly pleasant in here unless it involves a tax of some kind. [Laughter.]

Senator LAUTENBERG. Thank you.

The CHAIRMAN. Senator Mitchell.

Senator MITCHELL. Thank you, Mr. Chairman. I want to express my appreciation to you for promptly scheduling these hearings on the Superfund reauthorization. Prompt action by this committee is essential if we are to complete action on this important legislation this year.

The bill before us reauthorizes the Superfund law at a level of $7.5 billion over 5 years. It has become clear to those of us that sit on the Environment and Public Works Committee—and I believe there are seven members of this committee who do so—that even this high an increased level of funding will not complete the task we face. Since the Superfund law was first enacted in 1980, the EPA has undertaken a comprehensive inventory of hazardous waste sites across the country. It is now estimated that there are as many as 22,000 potentially hazardous waste sites in the United States, about 10 percent of which may be serious enough to justify their being placed on the priority list. EPA plans now call for it to initiate long-term cleanup at about 125 such sites each year. As anyone can readily calculate, that means that about a third of the priority sites can be reached. And by reached I mean work initiated by EPA over 5 years. There will fortunately, as Mr. Thomas has told us on the Environment Committee, be some State and private action to compliment that. But it is clear that we face a monumental task so that even continuation at the modest rate proposed requires the kind of funding increase authorized by the bill before us.

As as we listen to the witnesses today and on Friday, I urge all the members of this committee to keep in mind the magnitude of the hazardous waste problem that confronts our Nation.

The Environment and Public Works Committee appropriately deferred to this committee on the issue of taxation. However, that committee did examine the number of revenue-raising options in addition to the feed-stock tax increase in an effort to spread the burden. And I'm confident that this committee can evaluate all of these options and devise a revenue proposal adequate to fund the Superfund at the recommended authorization level in an equitable manner.

I thank you, Mr. Chairman. I look forward to hearing the witnesses today.

The CHAIRMAN. Are there any other opening statements?

Senator CHAFEE. Mr. Chairman, I would just like to say that as a member of the Environment and Public Works Committee, we spent considerable time on this matter, and as has been pointed out from the witnesses and from the opening statements, there is no question this is an extremely serious problem. That's undisputed. Time isn't going to make it simpler. It's not going to go away. It's going to get more expensive the longer we wait.

The Environment and Public Works Committee came out with a proposal of $7.5 billion over the 5 years. That was based on some testimony we had from the EPA that this was about what they could absorb so we didn't go above that. There is some dispute as to how much they can absorb.

I, for one, am anxious to get on with this matter and hope that we can come up with a formula for raising the taxes and get a bill out of this committee, and to the floor, and passed. I know that's a big challenge, but we ought to devote every possible energy we can in order to meet that challenge because the time is rushing by and cleaning up these sites is going to get more expensive the longer we wait.

Thank you, Mr. Chairman.

The **Chairman**. Senator Durenberger.

Senator **Durenberger**. Mr. Chairman, I would like my full statement to be a part of the record but I just want to make an observation for those members who are not among the seven that lived through Superfund at EPW. And that is we really are in the next couple of weeks facing an interesting sort of a situation because a lot of people have been pushing the heck out of Superfund on the theory that another Reagan administration wasn't going to be very generous with Superfund reauthorization. And the administration—everybody else was taking the view, well, it doesn't have to be done this year. We can wait until next year and maybe we will do a good job of it.

And now what we have before us—and I know we are only considering the tax title—but what we have before us is a situation where the administration is being offered an awfully good deal by the Environment and Public Works Committee. I mean it is a real slim, trimmed down, only a sort of a semipublic works program, not the big one that the House has been pushing. And it seems to me they are being offered an awfully attractive deal which says take this for 5 years and you don't have to worry about getting into all of these other things that lie out there.

So it is very interesting and strikes me that our role here is not to deal with the totality of it so much as the reality of how a tax affects the purposes for the legislation. And as others have said, I hope that we can spend some time trying to design a more effective tax system for this bill than has been in the old legislation or was suggested by people on the House side.

The **Chairman**. I would just say, obviously, if we can reach some agreement with all the parties involved, I would like to do it myself. But if that is not possible—I think the climate might be pretty good for that if everybody was willing to look at it objectively.

But let's hear the witnesses first because there are a lot of questions that should be answered.

First, we have the administration witnesses: Mikel Rollyson, Tax Legislative Counsel, Department of the Treasury; Lee Thomas, Assistant Administrator, Office of Solid Waste and Emergency Response, Environmental Protection Agency.

STATEMENT OF MIKEL M. ROLLYSON, ACTING TAX LEGISLATIVE COUNSEL, DEPARTMENT OF THE TREASURY, WASHINGTON, DC

Mr. **Rollyson**. Good morning, Mr. Chairman, members of the committee.

The **Chairman**. I assume there will be questions directed at both of you, and if you can summarize your statements, as you normally do, it would be helpful.

Mr. **Rollyson**. Yes; I'm aware that you are on a very tight agenda here today. And our full statement has been submitted.

Let me just summarize our testimony for you. I will be addressing only the taxing provisions of the bill.

First, however, I would like to emphasize the administration's continuing commitment to protecting the public and the environment from improper disposal of hazardous-chemical substances. During the past 3 years, the Treasury Department has been actively participating with other agencies in an intensive review of the Superfund legislation to determine how best to fulfill the President's commitment to the public and the environment. Reauthorization of the Superfund provision before the current law expires in September 1985 is a top administration priority, but we believe that it would be more appropriate to defer authorization and any refinement of the legislation until that review is completed.

Let me just summarize briefly the current taxing provisions of H.R. 5640 and comment upon the recommendations out of the Senate Committee on the Environment, and some of the proposed alternatives thereto.

As you know, the Superfund is currently funded for the most part by three principal taxing provisions—general-revenue appropriations, which are relatively small; an excise tax on crude oil at the rate of approximately $0.79 per barrel; and a feed-stock tax or excise tax on chemicals that are manufactured, produced, or imported.

The chemical-feed-stock tax varies in rates depending upon the particular chemical subject to the tax. The provisions of H.R. 5640 would substantially increase the taxes on crude oil and the feed-stock tax on the various chemical products. These taxes are to be further increased in the event that prior to July 1986 there is not imposed a significant waste-end tax. And that waste-end tax is to be developed pursuant to a joint study by the Treasury Department and the EPA.

H.R. 5640 also proposes significant increases in general-revenue appropriations. The comment upon the current taxes and those proposals—the current feed-stock tax does provide a rational mechanism for imposing the cost related to hazardous substances on those parties who use those hazardous substances and hazardous chemicals. I might add that, to date, the Internal Revenue Service has not had any significant difficulty in administering the current feed-stock tax.

The proposed increases to the feed-stock tax would raise a question, which has been alluded to here today, and that is whether or not the substantially increased taxes would cause competitive problems for those manufacturers and producers who are subject to the greatly increased taxes.

The answer to that question is not clear. It is likely that certain companies would be able to pass through the bulk or all of the increased taxes, depending upon that company's dominant position in the market, and the extent to which there are other competitors coming into that market.

Nevertheless, it is unclear as to whether all companies would be able to pass on those taxes.

I would like to comment briefly on the Senate Environment Committee's suggestions. They have suggested that several alternatives be explored to the feed-stock tax and the general appropriations tax and crude oil tax that we currently have. We agree that we should carefully evaluate all of the options proposed by the Senate Committee on the Environment. Nevertheless, I would like to note that we do have serious concerns about the various waste-end tax proposals and certain of the taxes on derivative imports that have been proposed to date. I don't want to say it is impossible to design a workable or manageable tax of that character, but those proposed to date would cause us serious equity concerns and administration concerns.

So just to reiterate, we think we should conclude our studies and defer resolution of this matter until all of this information has been digested.

Thank you.

[The prepared written statement of Mr. Rollyson follows:]

For Release Upon Delivery
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September 19, 1984

STATEMENT OF
MIKEL M. ROLLYSON
ACTING TAX LEGISLATIVE COUNSEL
DEPARTMENT OF THE TREASURY
BEFORE THE
COMMITTEE ON FINANCE OF THE
UNITED STATES SENATE

Mr. Chairman and Members of the Committee:

I am pleased to be here today to present the Department of the Treasury's views on the taxing provisions of H.R. 5640, the Superfund Expansion and Protection Act of 1984, and to comment on the general taxing options recommended for study by the Committee on the Environment and Public Works with respect to S. 2892, the Superfund Amendments of 1984.

I want to emphasize the Administration's continuing commitment to protecting the public and the environment from the release or improper disposal of hazardous chemical substances. We support the basic objectives of S. 2892 and H.R. 5640 to reauthorize the taxing provisions of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"). During the past three years, the Treasury Department has been participating with other Administration agencies in an intensive review of CERCLA and related legislation to determine how best to fulfill the President's commitment to the public and the environment. Reauthorization of the taxing provisions of CERCLA before the current law expires in September 1985 is a top Administration priority, but we believe it would be more appropriate to defer reauthorization and any refinement of the CERCLA legislation until that review is completed.

At the outset, I would like to emphasize that my comments on H.R. 5640 address only the taxing provisions of the bill, and my comments on S. 2892 address only the general taxing options recommended by the Committee on the Environment and Public Works. The Environmental Protection Agency ("EPA") has submitted a statement which relates primarily to how funds deposited in the Hazardous Substance Response Trust Fund (i.e., the "Superfund") should be expended.

BACKGROUND

CERCLA provides the Federal Government with the authority to clean up hazardous chemicals leaked into the environment, to pay for damages to natural resources caused by such chemicals, and to recover the costs of such cleanup and restoration from the parties responsible for releasing the hazardous substances. The response program is administered by the EPA and is financed by the Superfund.

CERCLA authorizes appropriations to the Superfund equal to $44 million per year for fiscal years 1981 to 1985. The Superfund is principally funded, however, by the excise taxes on crude oil and certain specified chemicals imposed by sections 4611 and 4661 of the Internal Revenue Code. Section 4611 of the Code imposes an excise tax of .79 cent a barrel on both domestic and imported crude oil received at a United States refinery, domestic crude oil used or exported before it is received at a United States refinery, and petroleum products entered into the United States for consumption, use, or warehousing. Section 4661 of the Code imposes an excise tax on 42 listed chemicals sold or used by the manufacturer, producer, or importer of the chemicals. These taxed chemicals are either themselves hazardous or are the basic chemical components of nearly all other major inorganic and organic hazardous wastes. The tax is assessed at rates ranging from .22 cent per ton to $4.87 per ton depending upon the chemical. The tax rates for the listed chemicals reflect a Congressional decision to allocate 65 percent of the tax burden to petrochemicals, 20 percent to inorganic chemicals, and 15 percent to petroleum. This allocation was based on the respective proportions of such substances found present in hazardous waste sites at the time of enactment of CERCLA. The rate of tax on any chemical, however, is limited to 2 percent of its wholesale price as of 1980.

CERCLA imposed upon those who generate, transport or dispose of wastes, the liability for damages caused by a release or threatened release of hazardous substances. Hazardous substances are defined to include those hazardous substances specified under various other environmental statutes as well as substances, as determined by EPA, which when released into the environment may present substantial danger to the public health or welfare or the environment. Responsible parties are strictly, jointly, and severally liable for the costs incurred by the Federal Government or a state government associated with removal and cleanup of hazardous waste releases, other necessary response costs, and damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss.

Liability limits are fixed by statute. Generally, liability is limited to response costs plus $50 million. The liability limitations do not apply, however, if the release or threatened release is the result of willful misconduct or willful negligence or if the responsible person does not provide assistance and cooperation when requested by a public official. In addition, punitive damages up to three times the response costs incurred may be imposed if the responsible person fails without cause to provide remedial and removal action when ordered by the President.

CERCLA also established the Post-Closure Liability Trust Fund. This fund is obligated to pay all costs arising out of a liability imposed by CERCLA with respect to a hazardous waste disposal facility after its closure, provided the facility has received a permit under Subtitle C of the Solid Waste Disposal Act, and complied with other regulatory requirements designed to protect against future releases of hazardous substances. Thus, if these prerequisites are satisfied, future liabilities arising from the operation of the facility are shifted from the responsible parties to the Federal Government. The Post-Closure Liability Trust Fund is funded with revenues collected under section 4681 of the Code, which imposes a tax on hazardous waste received at a qualified hazardous waste disposal facility. The tax is assessed at a flat rate of $2.13 per dry weight ton, and is imposed upon and collected from the owner or operator of the facility.

The authority to collect the taxes enacted by CERCLA, including the tax supporting the Post-Closure Liability Trust Fund, terminates on September 30, 1985.

DESCRIPTION OF THE TAXING PROVISIONS OF H.R. 5640

H.R. 5640 increases the excise tax on domestic and imported crude oil and imported petroleum products from .79 cent a barrel to 7.86 cents a barrel, effective January 1, 1985. The tax would be extended through September 30, 1990.

The bill also adds certain chemicals to those taxed under Code section 4661 bringing the total number of feed-stock chemicals subject to the tax to 56. In addition, the tax per ton would range for 1985 from .78 cent per ton to $30.00 per ton depending on the chemical manufactured, produced, or imported. The rates generally were determined by taxing each substance at the lesser of $30 per ton or a specified percentage of its estimated 1985 selling price. The percentages used were 1.5 percent in 1985, 2 percent in 1986, 2.25 percent in 1987, and 3 percent in 1988 and subsequent years. In addition, the rates specified are to be adjusted for inflation. No attempt was made to achieve a predetermined allocation of the tax burden between the petrochemical, inorganic, and petroleum segments.

If a tax on the disposal of hazardous substances (a "waste-end tax") is not enacted by July 1, 1986, increases in the tax rates on petroleum products and feed-stock chemicals will take effect on January 1, 1987. The petroleum tax will increase to 9.65 cents a barrel, and the tax rates per ton on feed-stock chemicals will range from $1.56 per ton to $35.00 per ton for 1987 through 1990. The rates of tax on feed-stock chemicals for the period generally equal the lesser of $35 per ton or a specified percentage (3 percent in 1986, 3.5 percent in 1988, and 4 percent in 1990) of the estimated 1985 selling price, adjusted for inflation.

The bill requires the Secretary of the Treasury, in consultation with the EPA to submit to the Committee on Ways and Means and the Committee on Finance by April 1, 1985, proposals for a tax on the disposal of hazardous wastes. These proposals are to be presented in legislative form and are to be designed to discourage the disposal of hazardous wastes in environmentally unsound ways.

H.R. 5640 also directs the Treasury Department, in consultation with the International Trade Commission, to submit to the Committee on Ways and Means and the Committee on Finance by April 1, 1985, a study of alternatives for taxing imported chemical derivatives. This study is to examine the probable economic effects of the increased feed-stock tax on U.S. manufacturers of substances derived from taxed feed-stock chemicals. The study is also to address the legality of taxing imported derivatives under the General Agreement on Tariffs and Trade. Finally, the study is to evaluate the administrative feasibility of a tax on imported derivatives, including substances that would be subject to the tax, the method for determining the tax rate of these substances, and the mechanism for collecting and enforcing the tax.

The provisions of CERCLA that establish the Post-Closure Liability Trust Fund are repealed by H.R. 5640, effective October 1, 1983, and the Post-Closure Liability Trust Fund is terminated as of that date. Liability for certain damages from the release or threatened release of hazardous waste from waste sites after their closure would therefore remain with the responsible parties for such facilities. Taxes already collected from owners and operators of qualified hazardous waste disposal facilities under Code section 4681 would be refunded with interest to such persons.

Appropriations to the Superfund are authorized by H.R. 5640 equal to $421 million per year for fiscal years 1986 and 1987, and equal to $496 million per year for fiscal years 1988, 1989, and 1990.

In summary, under this proposed taxing regimen the Superfund would be funded by revenues generated by increased taxes on crude oil and petroleum products, an increased feed-stock tax, and by increased yearly appropriations from general revenues. Such taxes would be increased, effective January 1, 1987, if a waste-end tax is not enacted by July 1, 1986. Further, a study of alternatives for taxing imported derivatives of feed-stock chemicals, to be completed by April 1, 1986, would be mandated.

DISCUSSION

The Current Feed-Stock and Waste-End Taxes

The feed-stock tax enacted by CERCLA reflects the policy decision that Federal Government action taken to clean up and contain spills or threatened or actual releases of hazardous substances and the payment of damage claims when responsible parties are not known should be funded by the users of hazardous substances rather than by the general revenues. Although the feed-stock tax has been criticized on the grounds that the tax collected from any individual firm is not based upon that firm's actual experience with hazardous substances and provides at best a form of rough justice, the tax is premised upon the fact that there are environmental costs associated with the use of hazardous substances. Prior to 1981, these costs were not reflected in the price of the products made from such substances. By imposing a tax on the basic building materials used to make hazardous products and waste rather than on the waste and end products themselves, it was anticipated that the tax would be reflected in the price of the end products and in effect borne by all persons utilizing hazardous materials.

The chemicals currently subject to tax generally appear in the response sites now being investigated by EPA. Therefore, in the aggregate those taxpayers who produce, manufacture, or import hazardous wastes appear to be funding the Superfund activities. Moreover, the Internal Revenue Service ("IRS") has not encountered substantial difficulties in administering the feed-stock tax.

The current waste-end tax was first levied on October 1, 1983 and is imposed only on the owners or operators of qualified hazardous waste disposal facilities. The tax is based upon the amount of hazardous waste deposited at the facility. Because the current waste-end tax was not imposed until October 1, 1983, the IRS has had little experience in administering this tax.

Revenues from the waste-end tax are used to fund the Post-Closure Liability Trust Fund. Because payment of the tax shifts liability for post-closure damages to the Federal Government, the tax payments can be equated with premium payments for post-closure Government liability insurance paid by such owners and operators. In the absence of such insurance, owners and operators of disposal facilities would be liable for post-closure claims in perpetuity. The release of liability provided by the Post-Closure Liability Trust Fund encourages compliance with EPA standards for waste treatment and fosters the development of new and the maintenance of old hazardous waste disposal facilities. At present, the EPA is studying the impact that various state-imposed waste-end taxes have on waste management techniques and will submit its recommendations to the President on the use of waste-end taxes before year-end.

Proposed Increased Taxes on Petroleum Products and Feed Stocks

H.R. 5640 would increase the tax on crude oil and imported petroleum products approximately ten-fold and would increase the tax on certain feed-stock chemicals approximately forty-five fold provided a waste-end tax is enacted by July 1, 1986. If a waste-end tax is not enacted by this date, the tax on crude oil and imported petroleum products would increase approximately twelve-fold while the tax on certain feed-stock chemicals would increase approximately eighty-fold by 1987.

The extent to which a manufacturer would be able to pass on to its customers the proposed tax increases is uncertain. The ability to do so depends upon a number of factors, including how responsive production and consumption are to changes in prices. For example, other things equal, it will be easier for a firm to pass on the tax if no close substitutes for the taxed chemical exist and if that firm and other firms bearing the incidence of the tax dominate the market. While it is likely that some manufacturers will be able to pass on the tax increases, it is difficult to determine whether the tax will be passed along in a particular case as the tax is imposed upon a large number of chemicals whose production and consumption are characterized by a wide variety of market conditions. More information on the impact of these proposed taxes will be available from the Congressionally mandated studies currently being conducted by EPA and scheduled for completion before the end of this year.

Proposed Termination of the Post-Closure Liability Trust Fund and Refund of Tax

We agree in principal with shifting the burden of post-closure liabilities to those persons responsible for disposing of hazardous waste, as would occur under the proposed repeal of the Post-Closure Liability Trust Fund. It is not clear, however, that adequate private insurance is available to cover the long-term liability of operators and owners of hazardous waste disposal facilities.

In March 1982, the Treasury Department issued a report regarding the feasibility of the substitution of private insurance for the current statutory scheme under which post-closure liabilities are assumed by the Post-Closure Liability Trust Fund. The report noted that private insurance would have to meet the following standards in order to substitute for the coverage extended by the Post-Closure Liability Trust Fund. First, private insurance would have to be available for all qualifying hazardous waste sites at premiums sufficiently low to counteract "midnight dumping." Second, the private insurers would have to be willing to accept an uncertain and potentially unlimited exposure to liability as defined under CERCLA and any other law. Finally, private insurance would have to provide financial assurance for liability and for the monitoring and maintainance of such sites in perpetuity. The Report concluded that this type of comprehensive private insurance option is not feasible now or in the foreseeable future.

The report did not address whether some sharing of liability between Federal Government and the private sector would be a viable alternative to the Post-Closure Liability Trust Fund. Further, the report was based upon the private insurance market shortly after the enactment of CERCLA, not the market that exists today. A forthcoming EPA study of the Post-Closure Liability Trust Fund will address these issues.

H.R. 5640 requires the IRS to refund all taxes paid to the Post-Closure Liability Trust Fund. Such refunds may be justified on the grounds that the recipients are assuming the post-closure liabilities. In some cases, however, the refunds might constitute a windfall to those taxpayers who have passed the cost of the tax on to their customers. Further, the cost of administering the refund procedure may well exceed the revenues thus far generated by the tax. As an alternative, if the Post-Closure Liability Trust Fund is repealed, the revenues could be transferred to the Superfund to further fund Government response activities.

DESCRIPTION OF THE GENERAL TAXING OPTIONS RECOMMENDED FOR STUDY BY THE COMMITTEE ON THE ENVIRONMENT AND PUBLIC WORKS

The Committee on the Environment and Public Works has expressed the view that the taxing mechanism currently employed to fund the Superfund should be examined and revised in order to ensure that the tax burden is shared by a broader class of chemical producers and consumers. The Committee has also recommended that the Superfund taxes be amended so as to avoid placing domestic manufacturers of chemical and derivative products at a competitive disadvantage vis-a-vis their foreign counterparts. Finally the Committee has recommended that the Superfund taxes be more equitably applied to the industries and companies that have created the problems which have made the Superfund necessary.

To accomplish these goals, the Committee on the Environment and Public Works has suggested that the following options for funding the Superfund be investigated: (1) basing feed-stock tax rates on the frequency with which the chemicals are found at Superfund sites; (2) shifting the feed-stock tax to primary and secondary derivatives of feed-stock chemicals; (3) adopting a waste-end tax, either on waste as it is generated or when it is stored, treated, or disposed; (4) imposing a tax on the transportation of hazardous substances; (5) increasing appropriations from general revenues; and (6) imposing a tax on corporate net receipts or gross profits.

The Treasury shares the view of the Committee on the Environment and Public Works that the current Superfund taxing regimen and alternative funding mechanisms, including the options suggested by the Committee, should be carefully evaluated before Superfund is reauthorized. The Congressionally-mandated studies being conducted by EPA and scheduled for release in December of this year provide the framework for considering all such options and for devising equitable revisions to the Superfund taxing scheme. We look forward to working with the Committee to reauthorize Superfund next year after this important data becomes available.

* * *

This concludes my prepared remarks on H.R. 5640 and additional options for funding the Superfund. I would be happy to respond to your questions.

STATEMENT OF LEE M. THOMAS, ASSISTANT ADMINISTRATOR, FOR SOLID WASTE AND EMERGENCY RESPONSE, U.S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC

The CHAIRMAN. Mr. Thomas.

Mr. THOMAS. Thank you, Senator.

Let me briefly try to summarize the testimony which is submitted in full for the record of the committee.

First, I would like to indicate to the committee that the objectives of the Superfund program are being met. We feel there is tremendous momentum in the Superfund program currently. We are moving forward to deal with the problem, which truly is a large problem and is complex.

We expect to be notified of about 22,000 sites. A major objective of the program is to identify sites and assess them. And we have completed that assessment at nearly 10,000 sites. And at those 10,000, we find that about one in three is a hazardous wastesite. At those sites we do a full field investigation. We have done that full field investigation at over 350 sites.

The second major objective is to respond to any site which presents an immediate threat. And we have done that. At over 400 sites, we have responded with an emergency program where it was an immediate threat to the public health or the environment. And of that number, we have completely cleaned up 177 sites. The others, we have stabilized over 200. We have got a few that are still in progress, but it's an ongoing program. Any site that presents an immediate threat, we are responding or we are assuring that someone else is responding.

The sites that present a long-term threat, then, are the ones that end up on our national priority list. Those are the chronic threats, the ones that are the most complex sites. We have identified 538 sites. We are going to add to that list next month. It will probably climb to close to 800 sites. We have estimated that it may get as high as 1,400 to 2,200 sites by the time we finish the assessment process, which we hope will be finished in the next 2 years.

Now of the number we have identified so far, we have initiated action. And by action, I refer to the sites where we actually have people in the field. The first stage is detailed engineering work. This work is being undertaken at 300 of those sites. And we actually have construction underway at over 100 of those sites. By the end of next year, with the budget that you have approved, the appropriation you approve, we should have construction underway at over 225 of those sites.

The final objective is our enforcement program. And that is getting the people to pay who contributed to the problem. That has moved significantly as well. We have achieved settlement at over 125 of those sites for over $300 million. That's money that has gone to clean up. It has not come out of the Superfund. So when you talk about $1.6 billion for the first 5 years, the amount of money that will go to clean up under this program will far exceed that. It will be over $2 billion because of the private money that comes in through our enforcement program.

So the momentum, we think, is significant. And it is at a pace which we feel has certainly accelerated about three times as fast as it was 18 months ago. As a matter of fact, the budget has tripled. The number of employees has doubled in that 18-month period of time. Our estimate is that if we tried to maintain that accelerated pace for the next 5 years, it would cost us about $5 billion to do so—that's in inflated dollar—to maintain the kind of pace we are talking about.

Now turning quickly to the bills that have been referred to you. The House bill, we have major concerns about provisions in the House bill. It goes far beyond the existing program; adds significant additional responsibilities beyond our major responsibility of cleaning up hazardous wastesites.

The Senate bill certainly is far preferable to the House bill as far as extension is concerned. And as Mr. Rollyson said, we are all strongly committed to extension and expansion of the Superfund program. We hope, though, that that extension and expansion is done with full information, full review, of the issues. And as you know, you asked us to complete a series of studies which we are in the process of completing to give you the information that you and we would like to have before that process is concluded. And, therefore, we have suggested that we conclude that process in the next year. In the process of reviewing those issues, we feel that several of the Senate provisions would be reviewed that cause us some concern. A major concern in the Senate bill is the provision of a pilot victims' assistance program. It goes far beyond the pilot nature of that program and deals with broad social and physical consequences of victims' compensation, far beyond a five-State pilot.

We feel that you are dealing with a major issue here of whether we should or should not compensate a particular class of people to whose concerns we certainly are very sympathetic, but it's a major social issue that we feel the Congress needs to consider thoroughly before that decision is made, whether it's a pilot project or a broader project. And we would urge close attention and review of that issue.

Second, it deals with a series of responsibilities that are more stringent than our current responsibilities to meet certain cleanup standards and to provide longer term operation and maintenance assistance to the States. Both of those provisions, we feel, will add to the cost of the program. So we feel some of the provisions in the Senate bill that has been referred to you will have additional costs over and above the cost of the current program. As a matter of fact, we have concluded, even though it's difficult to cost out all the provisions, that the Senate bill would probably add $1 to $1½ billion over and above the current cost of the program over a 5-year period of time.

So if you operated at the pace I suggested earlier, you are talking about a $6 to $6½ billion cost for the program based on the Senate bill, which is certainly far preferable to the kind of provision from a cost point of view that we saw in the House bill which we costed out at about $13½ billion.

Now turning finally to the point of the revenue issue. As I indicated to you, obviously, the Treasury Department is the expert in the administration on that issue. We have been working with them and other administration agencies to try to conclude the studies which you asked us to deal with. One of those studies is a major study on the tax provisions of the Superfund program. Within that study, we are dealing with the feed-stock tax that currently exists and an examination of the history and experience of that, an expanded feed-stock concept, a waste-end concept, and a combination of waste-end, feed-stock taxes concept. We hope to have that study concluded at least in draft form the middle of next month. We provided a good bit of the information to your staff. In addition to that study, we have a lot of other work underway on that, which obviously this committee knows is the most complex part of this whole issue that has to be dealt with, and that is, what is the potential impacts of any revenue raising issue.

So in conclusion, Mr. Chairman, one, I feel we have got major momentum under the program which we feel should be continued. We certainly support reauthorization and expansion of the program. And, finally, we hope that reauthorization and expansion will be done with full knowledge and data, much of which we are in the process of trying to gather and provide to you over the period of the next several months.

Thank you.

[The prepared written statement of Mr. Thomas follows:]

STATEMENT OF
LEE M. THOMAS
ASSISTANT ADMINISTRATOR
FOR SOLID WASTE AND EMERGENCY RESPONSE
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
COMMITTEE ON FINANCE
U.S. SENATE
SEPTEMBER 19, 1984

Mr. Chairman, and members of the Committee, I am Lee M. Thomas, Assistant Administrator for Solid Waste and Emergency Response with the U.S. Environmental Protection Agency. In that capacity, I oversee implementation of EPA's hazardous waste management regulatory program under the Resource Conservation and Recovery Act, and the national hazardous site cleanup program mandated by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) — Superfund.

It is a pleasure for me to be here today to offer my perspective on our recent progress in implementing Superfund, the direction we are heading in coming years, and our comments on the bill recently reported from the Senate Committee on Environment and Public Works. Additionally, I would like to bring you up to date on the work we have ongoing within the Agency with respect to the revenue-raising aspects of CERCLA.

Let me begin by stating the Administration's unequivocal support for the Superfund program and our commitment to its implementation. Elimination of imminent hazards caused by uncontrolled hazardous sites using our emergency authority, and application of the Act's remedial authority to address long-term hazards at the nation's priority sites are two of this Agency's highest priorities and will remain so for the years to come.

I believe our record during the past 18 months stands as tangible evidence in support of our commitment to Superfund. We have aggressively gone about the tasks of addressing immediate threats at hundreds of sites nationwide and initiated long-term cleanup actions at hundreds of other priority sites.

While we are committed to reauthorize Superfund in a manner to build on the momentum already achieved, we believe it is premature to enact legislation this year. As you are aware, the tax supporting Superfund does not expire until the end of Fiscal Year 1985. Furthermore, the Congressionally mandated studies that will provide the information we will need to draft our legislative package will not be ready until December.

Let me review the growth of the program since I came to the Agency. In FY 1983, the Congress appropriated $210 million for Superfund. Through the end of that year, we had initiated 202 Fund-financed and private-party Remedial Investigations and Feasibility Studies (RI/FSs), comprehensive engineering studies which are the first step in a long-term cleanup. We also initiated 239 emergency actions to address immediate threats to health. In FY 1984, the budget grew to $460 million, and our program has expanded accordingly. By the end of this Fiscal Year, we will have work underway at some 600 sites. Included in this total will be 395 emergency actions, 301 RI/FSs done by both the Fund and responsible parties, and construction, including both interim and long-term remedial measures, at 134 priority sites. During Fiscal Year 1985, the budget will be $620 million.

The Superfund program is, in many ways, a construction program. The planning and design stages of each project are the least costly, but they build into the program higher costs a few years down the road when construction begins. Today, we have initiated more than 250 Fund-financed RI/FS's. Over the next 12-18 months, many of these will move into the more expensive construction stage. As these constructions come on line, the program's ability to obligate funds will automatically grow.

Last week, in response to a question by the Chairman of the Committee on Environment and Public Works, I stated that if you maintained the current accelerated pace of the program over the next five years, it would cost approximately $5 billion dollars. This figure is uninflated and is based on our current project cost assumptions and includes the costs associated with the program, such as enforcement costs, research costs, and administrative expenses.

While the Senate bill contains fewer objectionable provisions than the House Bill, it, too, contains a number of provisions which will impose new costs which we do not believe are justified. Allow me to discuss a few of them.

VICTIM ASSISTANCE DEMONSTRATION PROGRAM

The bill reported by the Senate Environment and Public Works Committee contains a new Federal program to provide assistance to individuals who may have been exposed to and/or injured by hazardous substances. This provision is of deep and serious concern to the Administration.

We believe it warrants careful scrutiny by this Committee because it would establish for the first time a right to compensation from the Federal Government. Experience with other such compensation schemes —

such as the Black Lung Program — indicates that once the right to compensation is established, albeit on a limited scale, it is virtually impossible to resist the pressure to expand the program.

Under the bill, the Administrator would be required to select five States to establish and operate "for not less than a five-year period" a program of assistance "to individuals suffering injury resulting from exposure to hazardous substances." EPA would make grants to the States of from $3 million to $18 million per year (up to a total of $30 million per year). In turn, the selected States would provide eligible populations of individuals with

- A group insurance policy providing burial benefits where death is reasonably related with injury, illness or disease associated with exposure to a hazardous substance;
- A group medical benefits insurance policy paying all medical expenses (excluding treatment for accidental injury, routine pregnancy and well baby care) above $500 per year; and
- A group disability insurance policy which appears to apply to temporary and permanent disabilities, as well as partial and total disabilities.

However, under some of the criteria for eligibility for insurance benefits, there does not have to be a direct cause-and-effect relationship between the exposure and a particular injury. In fact, once eligibility is established the insurance would cover nearly all medical problems, including those totally unrelated to the exposure. Moreover, the bill only sets forth the "minimum program to be provided a state receiving a grant." A State could run a broader, less restrictive program if it chose to do so.

Although the program is only authorized at $30 million per year, there are numerous factors that indicate it would be virtually impossible to limit the program to that level. They include: (1) once free medical and disability insurance is provided to individuals in the program, it will be difficult to deny these people benefits after five years; (2) we know of no sound analyses showing that a State could run such a program within the grant limits provided; and (3) the 45 States not selected to have a demonstration program will want their citizens to receive the same benefits or entitlements as those in neighboring States that have the program, particularly once the public becomes aware that persons in demonstration States are receiving compensation while much more valid cases in other States go uncompensated.

Moreover, the program would provide insurance to some in society who have been (or might have been) injured through no fault of their own, but not to others so injured. No compelling rationale has been set forth for the Federal Government to provide medical and disability insurance to a person living near a hazardous waste site but not to an equally ill or injured person living in another part of town. This readily apparent inequity can lead to pressure to expand program coverage beyond its initial scope — and require Federal resources far beyond those now suggested.

The notion of compensating a portion of one class of people who may have been harmed through no fault of their own and not compensating the rest of that class raises serious questions of social equity. The threshold question of whom we compensate and how deserves the closest scrutiny by the Congress beyond the current debate over Superfund reauthorization.

In short, we believe that the social and fiscal ramifications of this proposal are not sufficiently understood and have not been adequately considered. We hope that the Committee will carefully analyze the consequences of this proposal before reporting on the bill.

OPERATION AND MAINTENANCE

Under our current program, the fund pays for 90% (or 50% in limited cases) of the cost of construction of the long-term remedy, with the State paying 10%(or 50%). Additionally, the fund pays 90% (or 50%) of the operation and maintenance of a remedy for one year after the completion of construction, with the state paying 10% for that year and 100% thereafter.

The language of this bill modifies that by expanding the definition of "remedial action" in certain cases. At sites where there is groundwater or surface water contamination, and the remedial action includes treatment in order to restore the water to a level that assures the protection of human health and the environment, up to the first five years of that treatment would be considered part of the "remedial action," and the fund would pay 90% of the costs, with the state paying 10%. Once the water had reached the required level of cleanup, or after five years, the treatment would be considered "operations and maintenance" and would be paid for under the existing O&M policy.

Although this provision is less objectionable than the one in HR 5640, which provides Federally financed O&M for an ulimited period, it nevertheless establishes the principle of providing O&M beyond the current limited period needed to insure that the remedy works properly. Enacting this provision would not only create pressure to continue O&M once the 5 year period expires, but would set a bad precedent for other Federal construction programs. In most, if not all, other Federal construction programs, such as those for highways and sewage treatment plants, the Federal Government pays for a major portion of the construction cost but none of the O&M costs. It has always been considered a State or local responsibility to take care of of and provide funding for operations and maintenance. The cost of compliance with this provision is approximately $215 million over the next five years.

HEALTH PROVISIONS/ TOXICOLOGICAL PROFILES

As part of the health related responsibility assigned to the Administrator of the Agency for Toxic Substances and Disease Registry, the bill requiries a health assessment to be done at all sites on or proposed for the NPL; authorizes health assessments where appropriate, at the request of EPA, States, citizens, physicians, or in response to a petition, and authorizes health assessments at RCRA facilities where necessary. If a health assessment indicates the need for a more involved health or epidemiological study, or the need to establish a health registry, the Administrator of the Toxic Substances and Disease Registry is required to undertake such action. Additionally, the Administrator is to develop a list of hazardous substances most frequently found at sites, to gather available information on these substances, and to develop toxicological profiles of them.

This provision is largely unnecessary and will impose costs without additional benefit to the public. Health assessments, for instance, may not be be necessary at all NPL sites as mandated by the provision. Furthermore, although the provision is limited to $30 million per year, the potential cost of compliance may be far higher.

LONG-TERM REMEDIES

In choosing a cleanup alternative, the bill encourages the Administrator to select remedies that provide long-term or permanent solutions to hazardous constituents found at a site, and states that onsite disposal without treatment is to be discouraged. In essence, this provision allows the Agency to consider a more expensive cleanup solution at a site if it provides a more permanent solution.

In addition, the Senate bill requires that all remedial actions, at a minimum, provide protection of human health and the environment and be relevant and appropriate under the circumstances. We estimate that compliance with these requirements in selecting a long-term remedy at a site could increase the cleanup cost per site and require an additional expenditure of between $500 and $900 million over 5 years.

REVENUE INFORMATION

In 1980, Congress adopted the feedstock tax approach to finance the Superfund program for a number of reasons. Generally, the feedstock tax system appeared administratively feasible, reasonably equitable, and certain to raise the level of funds needed to finance the response and enforcement actions authorized by the Act.

Congress did, however, recognize that an alternative tax system may be appropriate for financing a future Superfund program. Consequently, Congress mandated under Section 301 that the feedstock system and other alternatives be thoroughly examined at the end of the initial five-year period.

The general goal of the 301 (a)(1)(G) study is to provide Congress with an evaluation of alternative Superfund tax options to assist lawmakers in reauthorizing the program. The study evaluates the effects of the current feedstock tax as well the feasibility and desirability of alternative tax systems. We believe this information is vital to determining the appropriate revenue raising mechanism for Superfund and strongly encourage the Congress to wait to reauthorize the Act until this study is completed.

The various tax systems we are evaluating in the "G" report are a modified feedstock tax system, a waste-end tax, and a combination feedstock/waste-end tax system. The criteria we have used to evaluate these alternative tax systems include: economic impacts, equity, economic incentives, revenue generation capability, administrative feasibility, and programmatic effects.

When CERCLA was enacted, few waste sites had been investigated. Consequently, data were not available to establish tax rates for individual substances based on contribution to cleanup. Instead, tax rates were set by aggregating taxable materials into major groups, with each group's share reflecting its significance in hazardous waste generation.

Now that many waste sites have been more fully characterized, we are investigating the possibility of modifying the tax system to reflect more accurately the likely Fund expenditures. Factors which influence waste site cleanup costs attributable to hazardous substances include their frequency of occurrence, volume, concentration, release pathways and persistence.

We have work under way that identifies the substances to be taxed and establishes a relative contribution, based on the frequency with which EPA has found each substance at Superfund sites, for taxable substances. Additional work needs to be done on the economic impact of the taxes on industry, the balance of trade effects, the impact of the taxes on the States' ability to raise revenue, and the ability of the industries directly taxed to pass the tax through to their customers. Our 301(G) study will provide some of the information on these subject, and we have additional analyses ongoing to supplement the study.

Additionally, we have under way at the Agency a work group charged with the responsibility of analyzing the waste-end tax and developing a scheme that is administratively feasible and serves to complement our ongoing hazardous waste management program.

CONCLUSION

In closing, Mr. Chairman, let me restate this Administration's unqualified commitment to Superfund reauthorization next year. However, we believe that it is premature to reauthorize Superfund until the Administration has completed the Congressionally mandated studies and submitted its recommendations to the Congress.

I appreciate the opportunity to be here and will be happy to answer any questions you may have. Thank you.

The CHAIRMAN. One of the questions or statements made of a previous witness is that there is going to be a shortfall next year if we don't take action this year. Are either one of the witnesses prepared to answer that question? Let's say we don't do anything until June, July, or August of next year. We won't be here in August of next year, I guess.

What problem does that present to the States? There have been resolutions from the Governor's Association. Is that a problem? Do you see that as a problem?

Mr. THOMAS. As far as having available funds next year to do the work that needs to be done next year, our projection is that the budget that Congress approved is sufficient, which is $620 million, nearly $200 million more than we received this year—sufficient to do the work that needs to be done in fiscal year 1985.

I think some of those resolutions and some of the comments have been directed more toward anticipating what would happen in 1986. We don't anticipate a revenue shortfall next year.

The CHAIRMAN. I think you are correct in your last statement. But would it, in fact, slow down some of the efforts based on the anticipation of more money coming into the fund?

Mr. THOMAS. The projections that we have made have to do with assumptions that the program would be continued beyond September 30, 1985.

The CHAIRMAN. But at a higher level, I assume.

Mr. THOMAS. Yes, sir.

The CHAIRMAN. Now as I recall, we mandated a study in, what, 1980? You are about ready to complete that study, are you not?

Mr. ROLLYSON. That's the study that Mr. Thomas alluded to. It has been more of a joint study than just a Treasury study. But we have developed a great deal of time to it, and the study, as Mr. Thomas indicated, will be ready in a draft form in a very short while, in a couple of months. And we do anticipate having it fully ready by the end of the year.

The CHAIRMAN. Well, even though it's not in final draft, do you pretty much know now what the final draft is going to contain? And do you have the information available so we wouldn't have to wait until the end of the year?

Mr. THOMAS. The majority of the data, if not all the data, we have got in those studies has been shared with committee staff as we work through this process. And we are still at a point of pulling together final conclusions. Beyond those studies, we also have work groups that are trying to work through associated issues. For instance, we have looked at the whole waste-end tax issue. The waste-end tax issue is a very complicated issue.

We have a work group that is in the Agency that is trying to work through associated issues of the operational impact of a waste-end tax, where we have got our hazardous waste regulatory staff working with our policy staff on what would be the operational impact of that waste-end tax.

So that kind of information won't be concluded in this study period. We have got work beyond those studies. But I think the majority of the data in those studies have been shared with staff as we have gone through this process.

The CHAIRMAN. Senator Long.

Senator LONG. No questions.

The CHAIRMAN. Senator Roth.

Senator ROTH. Thank you, Mr. Chairman.

In a sense, I would like to go back to a question raised by the chairman about the urgency of acting this year. What is the down side? What won't you be able to do if we fail to act this year? For example, I have a couple of sites in my own State, among the 10 worst. Will you have adequate money, if we fail to move, to take care of these situations?

Mr. THOMAS. We will, Senator, have the money to deal with all the sites that we can manage for next year. That was the $620 million that has been appropriated. That means any site that presents an immediate threat, we will be able to take action. Any site that presents a chronic threat is on an action work plan for next year, already identified.

If we got additional money over and above the $620 million, I don't see how we would be able to spend it next year effectively.

Senator ROTH. The second question I would like to ask you is what will be the impact of either the Senate proposal or the House proposal on the chemical industry. We are talking about going up from $1.4 to, what, $7½ in the Senate, $10 billion? Is that a fairly substantial tax increase?

Mr. ROLLYSON. It is a substantial tax increase. I think, Senator, the answer to that question is unclear. As we understand it, the chemical market is dominated by a relatively small number of companies. To the extent that they do have such market dominance, they are in a better position to pass on that tax increase than would a taxpayer who is in the extremely competitive market, as long as the tax increase is imposed upon all of the players in that market. So if the increased tax is shared by all of the chemical companies competing in that market and they dominate, that group of companies dominate, the U.S. market, then they can probably pass on most of that tax. But I think that is an issue that can be further studied. And it is impossible to say with certainty what the impact will be on any given company.

Senator ROTH. There has been, according to the Washington Post, a loss of, what, 50,000 jobs in the chemical industry over recent years?

Mr. ROLLYSON. I think there has been a significant loss in jobs in the chemical industry. My understanding is that most of that loss derives from the fact of competition arising in the Middle East where they have low-cost products, and the strong value of the dollar.

Senator ROTH. My State, obviously, is a home of much of the chemical industry. And, obviously, I'm very concerned about anything that has a negative impact on jobs. I happen to be a strong believer in the Superfund, and that it ought to be substantially increased.

Mr. ROLLYSON. It would certainly have some impact, Senator. I think it is very difficult to quantify that impact.

Senator ROTH. Would it be significant?

Mr. ROLLYSON. On particular companies, it could be.

Senator ROTH. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Bentsen.

Senator BENTSEN. Thank you, Mr. Chairman.

What concerns me, Mr. Rollyson, is that I feel very strongly we have to reauthorize Superfund and the legislation on it, and that we ought to be moving on it now. We have known this for a long time.

Now when this study was authorized back in, I believe it was 1980, and you told us in your testimony earlier that you've had an intense interest and the administration has been very active trying to resolve these things. Here it is the 11th hour. My concern is that we are acting without an analytical foundation as to the economic impact.

We ought to have that information. I don't think that's planning ahead the way you should have. I think that ought to be available for us. I want to see us move on Superfund. I want to get it passed. It's important to the States, my State, and to the Nation in trying to clean up these waste sites. It has to be a high priority.

By the same token, what was done previously was something for administrative ease, not for equity. Now when they talk in the House bill about rebating for feedstock shipped overseas, that doesn't take care of the problem because we have to get to the derivatives. If you have a situation where a company here is using the feedstock and handling the derivatives, the problem is in the export competition. And it has to be a very serious problem.

I have had my staff working, as other members of this committee, trying to find a way to spread this tax and to make it more equitable. And we need to help in that regard. I must say I'm not pleased to see us after three years not coming up with better answers than I am seeing proposed.

Mr. ROLLYSON. If I might respond to two points that you raised. One is our timing of the report. It was mandated by Congress, and we are trying to adhere to that schedule.

Senator **Bentsen**. Come on, Mr. Rollyson. That doesn't mean that you wait until the last day or that you have to. There is no mandating you waiting until the last day.

Mr. **Rollyson**. No, Senator, we are not. If I may finish that. A lot of the data that we are in the process of digesting does relate to various States' experiences with various waste end taxes. Most of those state waste end taxes have been in place for a relatively short period of time. Therefore, we do not have a great deal of information relating to the various state experiences with waste end taxes. And because of limited data, it is hard to extrapolate from that.

We have spent a great deal of time looking at various waste end tax proposals. Waste end tax proposals that we have looked at and that we have considered, do have various problems with them, which I will try to elaborate on if you would like me to.

But I think to respond to your point, and also to respond to our concerns about the administrability of the tax, if the committee is interested in looking at a significantly broadening of the base for this tax, which I think is one of the principal concerns.

Senator **Bentsen**. You have heard it around this table.

Mr. **Rollyson**. Then I think that broadening is better obtained by, in effect, larger appropriations from general revenues. The broadening through of a waste end tax is not going to be a significant broadening of the tax as we will still try to target particular users and abusers, if you will, of the hazardous products. That will be very difficult to administer. And it may present the same type of equity problems that you are concerned with.

So I would suggest that if you are interested in a great expansion or broadening of the base for the tax, that you would consider seriously looking hard at larger shares of general revenues.

Senator **Bentsen**. I think, frankly, that's part of where it is going to end up.

The **Chairman**. Senator Chafee.

Senator **Chafee**. Thank you, Mr. Chairman.

Mr. Thomas, you testified before the Environment and Public Works Committee on the 12th of this month that an extension of the Superfund would cost $5.2 billion a year for the next 5 years. Now that figure did not include anything for inflation, did it?

Mr. **Thomas**. No, sir, it didn't.

Senator **Chafee**. And it didn't include anything for cost increase. For example, it's my understanding that you anticipated originally that it would cost $6½ million per site.

Mr. **Thomas**. That's the figure that is used in the $5.2 billion.

Senator **Chafee**. In the $5.2 billion.

Mr. **Thomas**. Yes, sir. Eighteen months ago, we were using a figure of $4 million per site. As we have gained additional experience with sites over time, we have found they are costing more than we originally thought.

Senator **Chafee**. And, indeed, the costs really constantly increase, do they not?

Mr. **Thomas**. They have.

Senator **Chafee**. So I think we could anticipate that that $6½ million is on the low side.

Mr. **Thomas**. Certainly as far as inflation is concerned. And it may for other reasons, just as you have indicated.

Senator **Chafee**. Yes. So the point I'm making is that your $5.2 billion figure, that's based on the current Superfund program. In other words, none of the other measures that have been considered, such as victims' compensation and so forth are included.

Mr. **Thomas**. That's correct. That $5.2 billion program was based on continuing the existing program at the accelerated pace for 5 years, uninflated. And I emphasize to add, as I did before the Environment and Public Works Committee, that we have made a series of assumptions there. Because of the limited experience we have, we assumed how many sites, how much a site will cost, how many sites will be financed by private parties versus out of the fund, how much money will be through cost recovery.

At this point in time, I would say a number of those assumptions are fairly soft. Two years from now I will give you probably a much better figure than I will give you today. But at this point in time, our best estimate is the $5.2 billion.

Senator **Chafee**. The point I'm making here is not to belittle your projections, but merely to say that they are on the low side based on experience and inflation.

Mr. **Thomas**. Although, Senator, there are things that could happen that could make that on the high side. Certainly not for inflation, but if our enforcement program was more successful, if we turned out not to have as many ground water problems as we have had in the first 3 years of the program, whatever—particularly enforcement side. It has really picked up momentum. If it continues like it's going, we could say that's the high side. I just hasten to throw that caveat in there.

Senator **Chafee**. Well, let me also say that the ground water problems are far more complicated than we ever anticipated.

Here is my concern. The suggestion is, to wait to reauthorize the program because you are going to have enough money, you anticipate, to get through the next fiscal year until September 1985. Thus we could reauthorize it next year some time, as the chairman suggested, in July or September or whenever it is. You pointed out that you have got enough to get through this year, but that's not on an accelerated basis. Am I not correct? In other words, that's not stepping up to the $5.2 billion scale that you yourself say is necessary.

Mr. **Thomas**. No, it is. The amount of money available next year is on the accelerated pace which we initiated, which would continue. The program is growing.

Senator **Chafee**. In other words, you would be gearing up for that accelerated pace.

Mr. **Thomas**. We already are. And I guess the point I would make to the criticism about the fact that if you reauthorize at the 11th hour next year, what would we do as far as turning the program around. We wouldn't turn the program around. We turned the program around already. We are expanding it as fast as I think we can expand it. We have doubled the staff, tripled the budget in 18 months. That is going up as fast as I think we can go up and manage it. And next year, we are continuing to go up. I mean it's going up $160 million.

Senator CHAFEE. In the next fiscal year, under the current program, how much will you be spending?

Mr. THOMAS. $620 million.

Senator CHAFEE. Six hundred and twenty million. And you say that will be gearing you up for spending a little over a billion per year in the following 5 years.

Mr. THOMAS. That's correct.

Senator CHAFEE. And you think that is shooting you into that plateau?

Mr. THOMAS. Yes, sir, the key thing on Superfund when you cost out the out years, it's when your major construction projects are going to be ready to come on line.

It's like any big construction program when you look at costs. We are averaging about 3 years from start to finish, the start being the start of the engineering phase, the finish being when we have our cleanup remedy in place.

So if you start the engineering study, our average cost there is $750,000 to $800,000 for the engineering study, but 18 months later you are ready to start the design. Six months after that, the construction. Your construction cost is running $6½ to $7 million per. So we are on an accelerated pace. And you will see the amount of money increase until it levels off. And that is until we are starting the same number of projects that we are completing.

Senator CHAFEE. Let me ask Mr. Rollyson a question about the waste-end tax. What are some of the problems with that? That seems like a possible route, a possible source of funds. Now what are the difficulties there?

Mr. ROLLYSON. Well, Senator, it is an extremely attractive conceptual tax because we would all be very fond of imposing the tax on those who are creating the problem. It certainly has a great deal of initial appeal.

The problems, however, fall into several categories, which—to tell you the categories first and then elaborate upon them, if you wish—is, one, insufficient knowledge of the degree of hazard of the relative chemicals and the manner of disposing of those chemicals. Two, a possibility of decreasing revenues. Three, a possible increase in the incidence of what is known as midnight dumping. And, four, serious problems of administration by the Internal Revenue Service because of now thrusting upon it the responsibility of being able to define and administer what are hazardous chemicals and what constitutes a disposition or a disposal of those hazardous chemicals. There is a lot to be said in each of those categories, if you would like me to go further.

But those are the four principal areas.

Senator CHAFEE. Well, I see the problems of increasing midnight dumping. But just briefly touch on what are the difficulties you say with the IRS and the collection problem.

Mr. ROLLYSON. Well, most of the waste-end taxes that have been structured would require, of course, the Internal Revenue Service, the one to administer that tax. And the Internal Revenue Service would then have to have the responsibility of defining what is a hazardous chemical, which would mean that the Internal Revenue Service would have to get into the business of doing what the EPA is really much more attuned to doing. And that is you would create an extreme overlap of responsibilities, which I am afraid, would increasingly be inconsistent between the Internal Revenue Service, because it would have certain objectives, and the Environmental Protection Agency, which would have certain other objectives.

Senator **Chafee**. Don't spend too much time on that because I just think you can cover that problem. The EPA could set forth the definitions and, indeed, could even do the collection if need be. I don't see why that's such a big challenge.

Mr. **Rollyson**. In addition, most of the taxes also involve a problem with defining, in fact, what is a qualified or proper disposal as opposed to an improper disposal. The Internal Revenue Service is not equipped to, one, define that or to know what a qualified disposal is. Most of the taxes would exempt from the tax a recycling of the chemicals. They would also exempt from the waste end tax certain storage of the chemicals, certain recycling and certain treatments of the chemicals. And that poses enormous administrative problems, which I think the result would be that the waste-end tax—and you must remember that the objective of a waste-end tax is to alter behavior, to make people stop doing something that they have been doing wrong. Therefore, you necessarily, if the tax works, face serious decrease in the tax.

So if you are looking at this as a way to raise revenues, it's not the ideal way to raise the revenues. If you are looking at this as a fee for, if you will, punishing——

Senator **Chafee**. Well, except you are achieving the goal of reducing the disposal of such waste.

Mr. Thomas, do you see all these problems?

Mr. **Thomas**. I guess from our point of view we have tried to focus our review on the operational implications of imposing the tax, if your objective is to use it as a disincentive for poor practices as far as disposal is concerned, and we are trying to work through that. I mean all the issues that Mike has indicated are certainly there, but as we get our operational people involved, you into things like, well, if you impose the tax say on underground injection, and depending upon what size tax you impose, what is the impact of that tax going to be. Is it going to be that you are going to shift away from underground injection of waste? Are you going to shift it over into an impoundment for evaporation purposes that may present more problems to you than what you were doing in the first place? Or if you put your tax maybe too heavy on one part of the disposal community, the waste-generation community, out there, will you, in fact, push them to improper disposal as opposed to a better method of disposal?

Those are the kind of questions are trying to work through. And the difficulties we are having in understanding is what would be the implications of imposing a tax at one particular point in the disposal process, and what are the margins as far as the behavior that you——

The **Chairman**. Could you summarize that?

Senator **Chafee**. Well, I have got it. There are a lot of problems with it. Thank you. [Laughter.]

The **Chairman**. Senator Mitchell.

Senator **Mitchell**. Well, Mr. Thomas, I would like to pursue the line of questioning that Senator Chafee started with. In 1981, the

EPA estimated the cost of future remedial action at $2½ million per site. Isn't that correct?

Mr. **Thomas**. I believe they did start at that point, Senator.

Senator **Mitchell**. In 1983, the EPA revised its estimate up to $4½ million a site. Isn't that correct?

Mr. **Thomas**. Yes, sir.

Senator **Mitchell**. And in 1984 the EPA again revised its estimate upward to $6½ million per site. Isn't that correct?

Mr. **Thomas**. Yes, sir.

Senator **Mitchell**. And yet in your projection of the future cost of the program, you have not assumed any increase in the cost of action at each site over the next 5 years. Isn't that correct?

Mr. **Thomas**. That's correct.

Senator **Mitchell**. Second, as Senator Chafee pointed out, you have not made any allowance for inflation over the next 5 years. Isn't that correct?

Mr. **Thomas**. That's correct.

Senator **Mitchell**. And, third, the EPA, under the Superfund, possesses authority to do other than simply clean up sites. Does it not? For example, you have authority to respond in the event of damage to natural resources. Isn't that correct?

Mr. **Thomas**. Yes, that's correct, Senator.

Senator **Mitchell**. And, in making your projection, you have assumed no expenditures for that purpose. Isn't that correct?

Mr. **Thomas**. I'm not positive about that. I don't believe they are included in there, Senator.

Senator **Mitchell**. That's right. And the fact of the matter is that there are now pending 2,700 million dollar's worth of claims previously made against the fund under that provision. Isn't that correct?

Mr. **Thomas**. There have been claims submitted against the fund which we don't feel have been valid claims up to this point.

Senator **Mitchell**. Right; so you make a projection of $5 billion, you don't take inflation into account, you don't assume any increase in the cost of cleaning up per site even though in the last 3 years you have had to increase your estimate from $2½ million to $6½ million a site, and you assume no expenditures from the other provisions of the fund. That's why, I think, Mr. Thomas, an argument can reasonably be made that you have come in with a very conservative, indeed, what in the trade would be known as as low ball estimate.

Mr. **Thomas**. Well, certainly on the inflation side, and I think we have always said that right up front. But I think the per site cost is fairly accurate. Certainly as we have gained more experience with the program, we are much more confident of our figures now than we were in the early days of the program where we were making estimates.

The natural-resource-damage claims, I believe, is the only component under the act that we haven't incorporated into that. In other words, we took into account the cost of HHS doing the health work in those—all the other components of the program.

Senator **Mitchell**. I noted with interest the lengthy portion of your statement devoted to the victim-compensation program. That, of course, is a regulatory part of the program that is within the jurisdiction of the Environment and Public Works Committee, is it not?

Mr. THOMAS. Yes, sir.

Senator MITCHELL. And that committee approved that by an overwhelming margin last week, did it not?

Mr. THOMAS. Yes, sir.

Senator MITCHELL. And I just want to say, Mr. Thomas, that I think your statement on that is one of the most egregious examples of circular reasoning that I have ever seen. The administration is strongly opposed to a national program of victim compensation. Isn't that correct?

Mr. THOMAS. I think the administration feels there are major issues that need to be reviewed in the whole issue of victims' compensation, and that we don't feel this mechanism is the way to deal with it.

Senator MITCHELL. You are opposed to it now, are you not?

Mr. THOMAS. We are opposed to this provision, certainly.

Senator MITCHELL. So I came forward with a very modest program in a limited scope to try to establish through experience the data necessary to develop a program of that type. And you come in here and oppose that on the ground that it doesn't provide compensation for everybody. You oppose a program that provides compensation for everybody and then you argue against a limited program by saying it's unfair because it doesn't compensation everybody.

Now I have to tell you that I think that is the most fallacious, shallow, circular reasoning in opposition to a program that I have seen in a long time. And that's right in your statement. I would like to quote it:

> The notion of compensating a portion of a class of people who may have been harmed through no fault of their own and not compensating the rest of that class raises serious questions of social equity.

I hope you will look at that and maybe come back and support a nationwide program, which is what I believe we should be doing. But I just want to say that we have been through this in the other committee, but this is a good faith effort in a difficult area. Many Members of Congress are deeply concerned about this. Not all the members of this committee heard the testimony before our committee of the very serious problems that human beings endounter in our society.

And to come in here and say that you are against it because it raises questions of social equity because it doesn't compensate everybody, I find just incredible.

Thank you.

Mr. THOMAS. Senator, I think we are very concerned about the issue as well. I feel the issue does have broad social policy implications as well as broad physical implications, and that's why we raised the issue in this committee.

Senator MITCHELL. Well, in the first place, Mr. Thomas, this has been an issue for 5 years. It was included in the original Superfund. I introduced legislation in early 1981 to deal with this. And will you tell me one thing the administration has done to contribute to a constructive solution to the problem?

Mr. **Thomas**. One of the things that we did, Senator, was carry forward with the requirement that we and Congress wanted to carry forward with, which was to do the full review and study of the victims' compensation issue. The other thing that the administration——

Senator **Mitchell**. Well, you were required by law to do that, were you not?

Mr. **Thomas**. As the other provisions of the law.

Senator **Mitchell**. And, in fact, that study concluded, did it not, after very extensive inquiries, that significant obstacles now stand in the way of individual human beings who seek to obtain redress for injury, illness, or death as a result of toxic waste exposure? Isn't that true?

Mr. **Thomas**. It did draw conclusions in that order.

Senator **Mitchell**. And, in fact, it recommended, did it not, a broad national program, an administrative compensation program, to meet this problem? Did it not?

Mr. **Thomas**. I think it did draw conclusions in a number of areas, Senator.

Senator **Mitchell**. And so the fact of the matter is you say that this ought to be studied and the administration is concerned, but in 5 years, the only thing the administration has done in this area has been to oppose vigorously every initiative made by myself or anybody else. And I think it's kind of late in the day to come in and say, well, we ought to study this thing carefully before we do anything.

Thank you, Mr. Chairman.

The **Chairman**. Senator Symms didn't have a chance to make a brief opening statement. Is that all right with Senator Durenberger?

Senator **Durenberger**. Yes.

Senator **Symms**. Thank you very much, Mr. Chairman. And I appreciate you yielding to me. And I'm sorry I had to leave here for a meeting we had on the Capitol steps with a national effort to limit taxes and balance the budget, which in this Senator's opinion is much more an important issue than trying to get the cart ahead of the horse on the Superfund.

But I would just like to say, in line with the questioning of the Senator from Maine, that I think there is a record that the EPA has made some positive steps and moves forward, Mr. Thomas, that I have seen and heard you say in the other committee. And that there is a good, positive record of moving forward with respect to the present Superfund program. And I just think that that should be pointed out here. And I'm sure you have maybe done that in my absence from the room.

But I find it somewhat troublesome, and I think we should be careful on this committee to not allow the Superfund to end up being some sort of an election-year gimmick when it is an important problem and it is a problem that a lot of Senators and a lot of the people in the country are concerned about.

But the original Superfund bill, that we had required EPA to present to Congress by December 1984, results of several studies concerning the program's needs. And Congress was scheduled to act on those results and reauthorize Superfund by 1985.

Now in my judgment, we are moving too precipitously to reauthorize this law now unless we want to scale it down even considerably more from what happened in the Public Works Committee. In moving precipitously to reauthorize this law now, I think Congress is taking action before all the information is available to determine what is actually needed and the best way to find those needs.

Now the OTA study, as I read the study—and I don't know whether we want to put it in the record, Mr. Chairman. We can discuss that, but it certainly should be part of our committee file—has completed an analysis of the House-passed bill which essentially confirms that the House-passed bill would mean the loss of hundreds of thousands of jobs, billions of dollars to the U.S. economy, an increased dependence on foreign sources of supply, and would have an impact on international agreements on trade.

Furthermore, the OTA study confirms that EPA cannot efficiently spend the money that is being raised in the House bill over that time period. Now, Mr. Thomas, would you concur with the OTA study that it would be difficult to spend all the money that the House bill is trying to raise efficiently, or would we just be throwing money out here so we could say we were trying to do something about the problem?

Mr. THOMAS. I don't think we could spend that money effectively or efficiently.

Senator SYMMS. Well, now I have to say that the Senate bill is a much scaled down version and more limited than what the House passed, but I still believe the Senate bill is higher than what EPA could handle because I don't believe that EPA has the programs and the systems in place to efficiently allocate the money. And I think it raises serious questions about how we are going to pay for this cleanup.

Now, obviously, we, in this committee, have to be interested in how we are going to raise the money and the taxes to pay for the program in a manner that will have the least damaging impact on the economy. And I'm confident that this committee will move to that direction to try to solve the problem in a way where we don't run everybody out of business.

But I do think that we should be considering even a more scaled down version than what passed the House. I would like to see us, at the maximum, Mr. Chairman, take what the recommendations of the OTA study were, which would be somewhere in the range of $1.2 billion a year for 3 or 4 years, and let EPA try to grow with that and take care of some of the obvious sites that need to be cleaned up in the country, and do those right before we try to take on everything, and end up just wasting a lot of the taxpayers' money and having more difficulties down the road in the future.

And I hope that this committee can move carefully and cautiously in that direction, if we move at all in this session of the Congress. I think it's worthy to note that this program is still authorized. It is still moving forward. There is progress being made. And it wouldn't be the end of the world if we didn't act on it until next year. If the committee would want to raise it up to say approximately $1 billion for 1 more year or $1.2 billion for a couple or more years, I think that might be reasonable. But I think what we are talking about here is just going to waste an enormous amount of money and jeopardize the jobs and security of hundreds of thousands of Americans, as well as strategic supplies for chemicals. That we need to keep that industry in this country and not run it offshore.

I thank you, Mr. Chairman.

The CHAIRMAN. Senator Durenberger.

Senator DURENBERGER. Mr. Chairman, first on the subject George left off on. Let me just say this: I don't know that, George, we are picking on the right two people here when we are talking about criticizing the administration for being fallacious, shallow, or egregious. I am probably as frustrated as you and the Republican chairman of the Committee on Environment and Public Works are that the administration in some context hasn't come to deal with the issue. But the reality of doing it right is of a particular concern to me.

I guess I have got the only State that has moved in one of these directions. We are going to stand out there all by ourselves and nobody is going to want to come and do business in our State.

I don't have time for a lot of five-State experiments, and I know that wasn't your desire either. I feel very strongly about a national approach to this issue.

One of the things I will tell you in advance that I'm going to do on the floor is try to get your experiment out of the Superfund and put it in general revenue where we can get the rest of the public involved in deciding whether or not we want to create another national health insurance program here like we did with coal miners. We now sit here—John Chafee sits here fighting trying to get some realism into black lung disease. I'm afraid we might get into that same situation.

I'm agreeing with you, George, that we ought to be frustrated that in 5 years they haven't done something. But by the same token, I'm alerting you to the fact that I don't think the five-State approach and funding that program out of superfund is appropriate either.

But I really wanted to follow up on the last part of John Chafee's question of both of you. I hear the arguments, Mike, about the problem of relative hazards of chemicals and that sort of leads to problems to a degree. And I hear from both of you about the midnight dumping problem.

But we have in place already in this country a system of what you might call waste end taxation; particularly, sanitary landfill. I mean all those landfill operations charge what is called a "tipping fee." And I think the average around the country is now about $10 per ton. I'm told there are about 180 million tons per year subject to that kind of tax. Several of those sites are on the national priority list and are landfills.

I know that a couple States—Wisconsin and New Jersey, for example—are going in and adding, in effect, their own version of a tipping fee.

Now I wonder if we haven't had some experience with that that would encourage us to look at a Federal add-on to the tipping fee, in effect, which might raise us a fair amount of money. And it would come at the waste end. We have got the experience out there now with those tipping fees. Apparently they aren't discouraging people from dumping.

Is that an area that in the next week or so we might well explore?

Mr. THOMAS. We have done some work. I was asking the staff whether we have done any work in the solid waste area. And as far as revenue production, we have done some work on that. I'm not fully aware of it. But we could certainly share that and take a look at it with committee staffs, committee members.

Senator DURENBERGER. I think if you have got information on how many people are involved—in effect, how many taxpayers are there—with that amount of experience under our belts already at that level, it strikes me that that might be an opportunity for us to look at.

Mr. THOMAS. Let us look at that and provide you what we have got and see what else can be done.

[The information from Mr. Thomas follows:]

Mr. THOMAS. As you know, most of our work as far as waste end is concerned, in looking at experience, was looking at the experience in taxing a hazardous waste disposal. But your suggestion is look at the broader issue of solid waste disposal.

Senator DURENBERGER. Right.

Mr. ROLLYSON. We will take a look at that, Senator.

Senator DURENBERGER. Thank you.

The CHAIRMAN. Senator Heinz.

Senator HEINZ. Mr. Chairman, first I would like to make a couple of brief opening remarks. Like Steve Symms, I was delayed. I had to testify over on the House side at 9:30. And you think we can conduct filibusters. There are more of them than there are of us. It's an equalizer.

But I just want to state for the record that I believe we should reauthorize the Superfund during this Congress. It is important that we do that in part to make a statement to the American people that we are not going to turn our backs on what is probably the most serious environmental problem of the decade; namely, the control of hazardous waste. And if I might say so, my home State of Pennsylvania has 39 of the original Superfund sites identified by EPA. And just last week, six more sites were added. And, of course, these are only the most dangerous sites. The EPA investigated more than 1,000 sites across Pennsylvania in choosing those 45. And will look at a total of some 22,000 nationwide.

Frankly, Mr. Chairman, my constituents are scared about what is going on out there. They are nervous about those sites that have been identified as having hazardous waste and are even more nervous about what may occur there, but has not yet been found. And, frankly, they are angry that EPA hasn't moved quickly enough to clean up those Superfund sites that have been discovered, and that remain near their homes.

Too often, when those complaints are made to EPA by them or by us, EPA's response to these complaints has been that they have limited resources and too many other responsibilities. So with that in mind, I think we need to move now to get the job done. I like the bill that the Senate is considering. The annual $1.5 billion is less than the House, but it seems to me that it is a good figure. It's a reasonable figure. And I hope we move ahead on it.

One amendment accepted by the Environment Committee which addresses the problem of maintaining Superfund sites after EPA has completed its remedial response is of particular concern to me. State officials are worried that they will not have adequate resources to properly care for these sites once EPA's responsibilities have ended. It makes no sense for the Federal Government to do a quick fix of surface contamination when there is extensive ground water contamination at a site. The State will be burdened with the very costly responsibility of an operation and maintenance program designed to clean up the subsurface. This is not a cost-effective solution. Long-term costs should be considered up front when the cleanup plan is selected. It is vital that those living around these sites have the assurance that once EPA has acted, that there will be no continued threat to public health and safety.

In raising the necessary revenue, we must look closely at the existing tax scheme: its revenue-raising ability and its effect on the industries involved. The bill before us has no recommended tax figures—just a list of those substances that are taxed under the current law. We must look at what the feedstock tax has done to the petrochemical industry. I am sure that some of those who are testifying here today can fill us in on that. We must also look at what effect an increased tax rate will have on both the domestic and world markets for these goods. But we must raise adequate revenue to get the job done and to get done right. This may mean expanding the tax base. In doing so, however, we should not include substances which do not contribute to the hazardous waste problem.

I am encouraged that we are considering this bill. I believe that it is a very important issue. However, we must proceed with caution. The program has had its problems in the past; we must now provide it with an efficient and effective future. In order to achieve that goal, we will have to raise adequate revenue.

At this point let me bring to the attention of the Treasury Department, in particular, a proposal that a number of us have been involved in studying; namely, the imported derivatives tax, which would be set to equalize the tax treatment of those imported substances that are derived from substances in this country that are subject to the superfund tax.

Two questions. First, does the Treasury Department have any problems with this concept, presuming we have a GATT-consistent concept here since it observes the principle of equality? And, second, are you in agreement with the list of—if you don't have any problems with the concept, are you in general agreement on the list of substances contained? If you don't know what list I'm referring to, it is a list of 10 substances derived from listed feedstocks, plus two substances, one substantially derived from feedstocks—PVC resins—and another, lead acid batteries.

Mr. ROLLYSON. I'm not familiar with the list of 12.

Senator HEINZ. Mr. Chairman, I ask unanimous consent that exhibit 1 that I will submit be placed in the record at this point.

The CHAIRMAN. Fine.

[The exhibit from Senator Heinz follows:]

EXHIBIT 1

U.S. IMPORTS OF SUBSTANCES TAXABLE UNDER PROPOSAL TO TAX IMPORTED DERIVATIVES (1983)

	SUBSTANCES	CUSTOMS VALUE ($1,000's) (1983)
	Immediately derived from listed feedstocks:	
10	Cumene	$ 46,054
	Ammonium nitrate	18,808
	Isopropyl alcohol	22,042
	Vinyl chloride	18,076
	Polybutadiene rubber	53,465
	Styrene-butadiene rubber and latex	66,671
	Polyethylene resins	40,807
	Ferronickel	60,694
	Ferrochrome OV 3% carbon	93,738
	Ethyl alcohol	101,584
	Subtotal	$ 521,939
	Substantially derived from Listed Feedstocks:	
11	Polyvinylchloride resins	53,738
	Subtotal	53,738
12	Lead-Acid batteries	47,150
	TOTAL	$ 622,827

Calculation of maximum tax revenue:

$622,827 x 5% = $31,141,350

Source: Bureau of the Census, U.S. Department of Commerce, U.S. Imports for Consumption and General Imports, FT 246, 1983.

Senator **Heinz**. What about the first question?

Mr. **Rollyson**. We do have significant concerns about policies underlying a derivative import tax and also the administration of such a tax. I think on policy grounds one has to consider that it operates upon the assumption that you are trying to treat the foreign manufacturer equally by imposing the same tax upon him that you are imposing upon the domestic manufacturer.

Implicit in that assumption is that the foreign country does not impose any tax burden or regulatory burdens upon that manufacturer of the hazardous waste. That is an assumption which may not be true.

Senator **Heinz**. Mr. Rollyson, I'm not sure I quite understand that point. The principle that the GATT espouses is national treatment.

Mr. **Rollyson**. I was not raising a GATT issue.

Senator **Heinz**. Oh, I'm sorry. I misunderstood you.

Mr. **Rollyson**. No; I was only raising the possibility that you would be taxing the foreign manufacturer twice. That is, if he is subject to—let's suppose France imposes a similar feed-stock tax on a producer of a chemical. If we then impose again our derivative product tax, the foreign manufacturer will, in fact, be taxed twice on that product.

Senator **Heinz**. That happens all the time. People get taxed at all kinds of levels. In France, they have a value-added tax which means you get taxed every time there is a transaction. I don't think that being taxed a sixth time versus a seventh time is all that material.

Are you saying that no one likes it?

Mr. **Rollyson**. There may be a GATT issue, but that's not the issue I'm raising here. I thought the assumption of the import tax was that you wanted to be sure you were taxing the importer, the foreign producer, the same way that you are taxing the domestic producer.

Senator **Heinz**. That is correct. And what has happened someplace else is between that manufacturer and his Government, not with our Government.

Mr. **Rollyson**. The point is that you are probably not imposing equal tax. You are imposing additional charge on the import, which may be fairer in the sense that it equalizes the burden or it may be——

Senator **Heinz**. How are we looking at that? From the standpoint of the French manufacturer? Is that how we are looking at it?

Mr. **Rollyson**. From any foreign manufacturer.

Senator **Heinz**. Why don't we look at it from the standpoint of the American manufacturer.

Mr. **Rollyson**. We should.

Senator **Heinz**. We pay the Treasury Department's salary, not the French.

It seems to me you are more concerned with what is happening with the way the French mess up their economy and their manufacturers than what we do.

Mr. **Rollyson**. I only felt, Senator, I was pointing out an assumption in the proposed tax. It has typically been argued in favor of the tax. That the tax would treat the foreign producer equivalently. I'm only pointing out that that is not true.

We may well decide that we want to impose a higher tax on foreign manufacturers.

Senator HEINZ. But you are not here to represent the foreign manufacturer .

Mr. ROLLYSON. I'm not saying that that is a bad thing. I'm only pointing out that it is not equivalent treatment.

Second, I think there is a tax-policy concern in that when you are taxing derivative products, the derivative product that is coming into the United States is not itself a hazardous product. Otherwise, it would already be subject to tax. Therefore, we are imposing a tax to allegedly protect the U.S. environment, which does not potentially damage that environment. And I think that raises some policy concerns.

Senator HEINZ. What are the policy concerns?

Mr. ROLLYSON. Well, if the concern is to protect the U.S. environment and raise taxes from those people who are damaging that environment, that tax doesn't achieve that goal. It's a protection tax.

Senator HEINZ. The purpose of the Superfund program is to protect the environment in a variety of ways, and a portion of the notion in Superfund is, of course, to help, if we can't find the guilty party right then and there, to pay for this.

It seems to me that what the imported-derivatives tax is driving at is to remedy an inequity stemming from a decision we have taken in this country to clean up our environment, one which has imposed uniquely on domestic manufacturers and, to date, has let the importers off without any equalization. What it seems to me you are saying is why should these fellows pay for our environmental problem. That is not the issue. As a matter of fact, if you want to put the revenue from the imported-derivatives tax into the general fund, that's all right with me. And then they won't be paying to clean up environmental problems. We will be addressing, consistent with the principle of national treatment, an inequity inflicted on our manufacturers. It seems to me that that's a choice that I didn't ask you about. Whether it should go into the general fund or into Superfund. And we can discuss that on another occasion.

But I wasn't really asking you that question. My time has expired.

The CHAIRMAN. Senator Bentsen.

Senator BENTSEN. I want to say, Mr. Chairman, I have a series of questions that I would like to submit to Mr. Thomas and to Mr. Rollyson, and I would urge very strongly that we get an immediate response so that we can have them for consideration. I will not go through the full list.

I want to get into the question of wet- and dry-waste tax proposals and how that is handled. I want to talk about injection wells. I want to talk about the review of some 20 States by the Office of Technology Assessment as to the utilization of waste end taxes.

I will submit those to you.

[The questions from Senator Bentsen and the answers from Mr. Thomas follow:]

1. Should a waste-end tax be imposed on a wet-weight or dry-weight basis? Which better distributes the burden of such a tax and which encourages environmentally safe forms of disposal and storage?

There is no clear environmental rationale for putting a waste-end tax on a dry-weight basis. It has been argued that dry-weight more fairly distributes the burden among taxpayers; however, these inequities, to the extent they exist, might also be efficiently rectified through the rate structure. If aqueous waste streams are perceived to carry a disproportionate share of the tax burden under a wet-weight tax, then tax rates could be lowered.

The term dry-weight is rarely if ever used in the context of hazardous waste disposal and there is no agreement on its definition. Dry-weight could be defined as either the non-water weight of the waste or its solids content. A solids content tax would make many highly toxic and mobile wastes (e.g., solvents) virtually tax exempt because there may be very little solid matter in the waste.

A wet-weight would be much simpler to levy, collect, and enforce than a dry-weight tax. A dry-weight tax basis would introduce entirely new testing, sampling, and verification procedures into the regulatory enforcement and tax collection process. The tax for the Post-Closure Liability Trust Fund ($2.13 per dry-weight ton) has created considerable confusion among potential taxpayers. This probably is a contributing factor in the poor performance to date of the PCLTF tax in raising revenues (approximately $3.8 million in the first two quarters).

A wet-weight tax would be less expensive to collect and enforce. A wet-weight tax would be collected using existing RCRA information and reporting systems and no new regulation defining testing protocol would be necessary.

Question. In your opinion, do we have available to us all the information necessary to evaluate funding needs within the next couple of years?

Answer. CERCLA mandates that the Agency prepare and transmit to Congress by December 11, 1984, a comprehensive assessment of the future funding requirements for the Superfund program based on the threat to human health and the environment posed by releases or threats of releases of hazardous substances. These studies will be available to the Congress in draft in mid-October. The final reports will be officially transmitted in December. These reports, prepared in anticipation of reauthorization, will provide Congress with a considerable amount of information as to the size of the problem and funding needs to address it.

Question. The studies Congress mandated in 1980 on Superfund revenue needs and options are scheduled to be released by the end of December of this year. Would it make more sense for us to consider Superfund revenue options after those studies are released, rather than now.

Answer. The studies to which you refer, along with the other § 301(a) studies mandated by CERCLA, will be delivered to the Congress before the end of the year. I believe that the information the Agency is gathering in the studies is vital to the reauthorization process. It is based on these studies that the Administration will make a recommendation to the Congress on the nature and extent of future funding requirements in its reauthorization bill next year.

2. How do you define hazardous waste for purposes of a waste-end tax?

A waste-end tax should be based solely on the Federal list of hazardous wastes and hazardous waste characteristics.[1] This should include Federal rulemakings to list and delist wastes. Additional listings and delistings by States should be incorporated into the definition of taxable waste only by act of Congress.

Hazardous waste generated by small quantity generators (SQGs) is excluded from most of the regulatory requirements of RCRA, and probably should also be excluded from a waste-end tax because a tax on SQGs may be largely unenforceable and would disproportionately increase the number of potential taxpayers relative to the potential increase in taxable waste. Enforcement would be difficult because neither EPA nor the Treasury currently is able to identify either SQGs or the manner and location of their waste disposal.

Moreover, assuming that there are as many as 500,000 SQGs (probably fewer, especially if the RCRA reauthorization lowers the limit for SQGs to 100 kilograms per month) and that each generates a maximum allowable quantity under the current statute of 1000 kilograms per month (one metric ton), taxing SQGs would only add about six million metric tonnes to the total amount of taxable hazardous waste. With the limits on SQGs proposed in RCRA reauthorization, SQGs would account for less than 600,000 metric tonnes of hazardous waste each year. In order to collect the tax on this waste, either the SQGs would have to be taxed directly or else the tax would be imposed on the facilities at which SQGs dispose of their wastes, including up to 16,000 municipal sanitary landfills.

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[1] 40 CFR Part 261.

EPA/TREASURY

Do you think enactment of a waste disposal tax would have any noticeable impact on so-called "midnight" or illegal dumping of hazardous wastes?

Illegal disposal

In general, any policy, regulation, or standard that increases waste management costs creates some incentive for some generators and disposers to consider by-passing the regulatory system.

The strength of the incentive created by the tax will be influenced by the size of the tax and tempered by whether the firm has made a significant investment in resources to comply with existing hazardous waste regulations, the enforcement capability of the government and feared consequences of being caught. The investment factor is significant because firms that have invested heavily and worked hard to comply with existing regulations should be less likely to take the risk of being caught if the tax is low relative to other costs.

Since almost all waste-end taxes have been in place for only a few years, it is difficult to accurately assess either their positive or negative effects. In recent interviews with States that have waste-end taxes, most States were concerned about the lack of resources to pursue an aggressive enforcement program; however, no States had evidence to confirm or deny the existence of illegal disposal, or increases in illegal disposal, as a consequence of the law.

In sum, while a waste-end tax may not create a strong incentive to illegally dispose or cause a noticeable increase in illegal practices, it is clear that some taxpayers will only have an incentive to comply when they perceive that the risk and/or consequence of being caught is fairly high (this will be especially true as rates increase). This requires an aggressive enforcement program.

Question. What do you estimate to be the level of recoveries from Parties responsible for dump sites over the next five years?

Answer. To date, EPA has recovered $6.4 million for 35 sites.

In addition, there are another 108 cases in various stages of development (i.e., cases undergoing cost documentation in the regional offices prior to referral to Headquarters, cases being reviewed in Headquarters, cases which have been referred to the Department of Justice, and cases which have been filed by Justice.) These cases seek to recover another $113 million.

EPA's cost recovery program will continue beyond these cases currently "in the pipeline." The CERCLA enforcement program consists of two components: attempts to secure "up front" private party response in lieu of Trust Fund outlays and cost recovery after Trust Fund revenues are expended. Fund-financed response actions are documented for all removal and remedial actions, and EPA and the Dept. of Justice will continue to develop cost recovery cases where responsible parties can be identified.

Question. Mr. Thomas, a ten- to forty-fold increase in contribution levels have been suggested for two chemical compounds, sodium hydroxide and potassium hydroxide, otherwise known as custic soda and caustic potash. Do these chemical compounds significantly contribute to our waste problems to the extent such and increase is necessary?

Answer. Two issues are raised by this question. The first relates to the selection of substances for taxation under CERCLA; the second relates to setting appropriate tax rates for selected substances.

Selecting taxable substances

Both sodium hydroxide and potassium hydroxide are taxable chemicals under the current CERCLA statute. In 1980, inorganic raw materials were selected as taxable substances if they met two or more of the following criteria:

They are inherently hazardous or hazardous in a number of forms;
They are hazardous in some form, if released;
Hazardous wastes are generated in producing them or their derivatives;
They may increase the hazard potential of other substances; and
They are produced in significant quantities.

Attachment A provides preliminary information to support continuing the tax on caustic soda and caustic potash. In addition, the attachment provides evidence of the extent to which the caustics or chemicals using sodium hydroxide and potassium hydroxide in production processes are found at sites scored through the Hazard Ranking System.

Setting tax rates

Tax rates for selected substances are dependent on the rule that is used for deciding the magnitude of the contribution to the Fund that each feedstock should pay. There are many options for setting tax rates. Congress' selection of a decision rule may or may not reflect the extent of contribution to the waste problem of the substances selected for taxation.

For example, rates could be set so as to minimize economic effects involved in achieving a given Fund size. As another approach, environmental considerations could be given paramount importance in determining the revenue contribution from each feedstock.

In 1980, Congress used an approach that combined environmental and economic considerations. Tax rates were set by aggregating taxable substances into broad industry groups (oil, petrochemical and inorganic), with each group's share reflecting its significance in hazardous waste generation. A revenue target was determined and tax rates were set within each group so as to raise the group's portion of the revenues. A rate for individual substances within a group was adjusted if it exceeded certain rate caps designed to prevent undesirable economic effects and for certain inorganic materials, to correct for any weight biases. In the case of the caustics, adjustments were made with the result that the tax rate per ton was significantly lower than the other inorganics ($.28/ton for caustic soda and $.22/ton for caustic potash).

H.R. 5640 used the approach that would minimize economic impacts. H.R. 5640 tax rates are set at 1.5 percent of estimated wholesale price in 1985, phasing up to 3 percent in 1988. An additional cap was imposed of $30 per ton. Tax rates on sales in 1985 for sodium hydroxide and potassium hydroxide are $2.82/ton and $9.83/ton respectively.

EPA is examining an alternative approach to establishing tax rates as part of the study mandated by Section 301(a)(1)(G) of CERCLA. The alternative under study seeks to match, to the extent the data permits, an individual feedstock's share of the revenue with its contribution to the environmental problem that the Superfund statute addresses. When CERCLA was enacted, few waste sites had been investigated. Now that many waste sites have been more fully characterized, it is possible to modify rate setting to reflect more accurately likely Fund expenditures. The work underway identifies the substances to be taxed and establishes a relative contribution for each feedstock, based on the frequency with which the feedstock and its derivatives are found at NPL sites. Tax rates set under this approach would depend on the revenue goal that Congress wished to achieve.

In summary, the evidence indicates that the caustics should continue to be part of any feedstock tax design. The selection of the substance itself is indicative of contribution to the environmental problem. However, the extent of a substance's contribution to the Fund is dependent on the decision rule selected by Congress in establishing the tax rates. This rule may or may not include consideration of the extent of contribution to the hazardous substance release problem.

Attachment A

RATIONALE FOR TAXING SODIUM HYDROXIDE AND POTASSIUM HYDROXIDE

- There are 3 main reasons for considering a tax on sodium hydroxide (NaOH) and potassium hydroxide (KOH):
  - Sodium and potassium hydroxide are used to produce numerous hazardous substances found at Superfund sites;.
  - These two chemicals may increase the mobility of other waste constituents at sites; and
  - Sodium and potassium hydroxide may themselves pose problems at Supefund sites.

Information supporting each of these reasons follows.

- Sodium and potassium hydroxide's derivatives are found at sites.
  - Sodium hydroxide and potassium hydroxide (KOH) are used in the production of numerous chemicals found at HRS-scored sites. For example, a probable route to 1,1 dichloroethylene involves the following reaction:

$$Cl_2CH\text{-}CH_2Cl + NaOH \rightarrow CH_2{=}CCl_2 + NaCl + H_2O .$$

    Exhibits 1 and 2 list the potential derivatives of sodium hydroxide and potassium hydroxide, respectively, that have been found at HRS-scored sites.

- Caustics may increase the mobility of other waste constituents at Superfund sites.
  - Caustics may facilitate reactions among other chemicals present at the site (this can decrease as well as increase hazards).
  - Sodium hydroxide and other caustics break down the structure of certain clays and increasing their permeability.[1]
    - -- NaOH will readily dissolve amorphous (non-crylstalline) clays. Amorphous clays make up a variable but important percentage of clays.
    - -- Crystalline clays (those clays having a definite chemical structure) are generally not dissolved or broken down by NaOH, but the surface layers of crystalline clays may be dissolved.

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[1] Jack Pierce, Ph.D., Smithsonian Institution. Personal communication, 9/17/84.

EXHIBIT 1

DERIVATIVES OF SODIUM HYDROXIDE FOUND AT HRS-SCORED HAZARDOUS WASTE SITES

Chemical	CERCLA Hazardous a/	HRS Frequency b/
1,1,1-Trichloroethane	X	116
Vinyl chloride	X	57
Trichloroethanes, N.O.S.	X	44
1,1-Dichloroethylene	X	27
Dichloroethylenes, N.O.S.		25
Dioxin c/		17
Aluminum and compounds		14
Sodium cyanide	X	6
Toxaphene	X	6
2,4,5-T	X	5
Tribromomethane	X	4
Methoxychlor	X	3
Parathion	X	3
Dimethyl formamide (DMF)		2
Resorcinol	X	2
1,2-Diphenylhydrazine	X	2
Sevin (Carbaryl)	X	2
Methyl parathion	X	2
Hexamethylenediamine		1
Azobenzene		1
Disulfoton	X	1
Diethylstilbestrol	X	1
Naphthol, N.O.S.		1
3,3'-Dimethoxybenzidine	X	1

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a/ Indicates chemicals included on the CERCLA list of hazardous substances.

b/ Number of HRS-scored sites at which the chemical was found (out of a total of approximately 880 sites currently in the HRS data base).

c/ Dioxin is a waste generated in the production of a number of pesticides and related compounds, including 2,4,5-T, which can be produced using sodium hydroxide.

EXHIBIT 2

POTENTIAL DERIVATIVES OF POTASSIUM HYDROXIDE FOUND AT HRS-SCORED HAZARDOUS WASTE SITES

Chemical	CERCLA Hazardous a/	HRS Frequency b/
Potassium cyanide	X	1 c/
Zinc cyanide	X	1 c/
Cyanogen	X	1
Copper cyanide	X	1 c/

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a/ Indicates chemicals included on the CERCLA list of hazardous substances.

b/ Number of HRS-scored sites at which the chemical was found (out of a total of approximately 880 sites currently in the HRS data base).

c/ Cyanides (soluble salts), N.O.S. were found at 74 sites.

    - Gibbsite is readily broken down by NaOH. Gibbsite is an aluminum-bearing clay that forms 0-20% of Kaolinite, one of the most common natural clays.
    - Montmorillonite is another common clay that may contain a substantial percentage of amorphous clay, and thus is subject to breakdown by NaOH.
    - KOH is chemically closely related to NaOH and likely has similar effects on clays.
  - Breakdown of clays would facilitate rapid contamination of groundwater and decrease the effectiveness of remedial measures such as clay liners and containment barriers.
    - The durability of grout curtains made of a variety of materials has been reported to be adversely affected by the presence of inorganic bases such as NaOH and KOH.[2/]
    - A 1% solution of sodium hydroxide has been shown to moderately increase the permeability of certain slurry walls (by a factor of 2 to 5).[3/]

- Sodium and potassium hydroxide may themselves pose problems at Superfund sites.
  - Caustics can pose a direct contact threat when present at hazardous waste sites.
  - Sodium hydroxide was detected at 7 HRS-scored sites, including one site currently on the NPL:
    - A silver reclamation facility that discharged caustic and contaminated wastewater for at least three years, contaminating an aquifer used for public and private drinking water.
  - Caustics were identified at a minimum of four immediate removal actions.
  - Sodium hydroxide is a high volume chemical which is spilled during transportation accidents. To date, however, no CERCLA funds have been spent on either sodium hydroxide or potassium hydroxide spills, probably because of responsible party action.

[2/] Gary Hunt, et al., Collection of Information on the Compatibility of Grouts with Hazardous Waste. Reprinted in: Land Disposal of Hazardous Waste--Proceedings from the Ninth Annual Research Symposium (Washington, D.C.: U.S. EPA, EPA-600/9-83-018, September 1983), p. 390.

[3/] JRB Associates, Handbook: Remedial Action at Hazardous Waste Disposal Sites (Washington, D.C.: U.S. EPA, EPA-625/6-82-006, June 1982), p. 122.

Question. Could you supply the Committee with EPA's best estimate of the total volume of hazardous wastes disposed in 1983 by various disposal methods on both a wet and dry weight basis?

Answer. The Agency has figures for 1981. The Biennial Reports for 1983 will be available in several months.

The amounts for 1981, in million metric tons, are:

Disposal process	Wet weight (MMT)	Dry weight (MMT)
Injection wells	32.0	0.16
Disposal surface impoundments	19.0	.095 - 0.57
Landfills	3.0	.3 - 1.6
Land treatment	.4	.008 - .02
Other (including ocean disposal)	.07	?

Question. One of the flaws of the current Superfund tax on chemical feedstocks has been its concentration on the chemical industry. Do you have any information on how the incidence of a waste end tax, which would apply to anyone who disposes of hazardous wastes, would differ from the current chemical feedstock tax?

Answer. Preliminary information available to the Agency indicates that chemical manufacturing and related industries currently pay virtually 100% of the feedstock tax. If a waste-end tax were enacted, our information indicates that this same industrial sector (although not necessarily the same companies) might pay approximately 50% of the tax. The remainder would be absorbed by other industrial interests.

Note to Lee Thomas, September 20, 1984.

From: Vic Kimm.
Subject: Senator Bentsen's request for Draft Report on Class I Wells.

Tom Ingersoll of your office transmitted Senator Bentsen's request this morning. The draft report on Class I hazardous waste injection wells is not available yet; however we have a draft of a paper summarizing the results of the study. We are happy to share this draft with Senator Bentsen.

AN IN-DEPTH SURVEY AND ASSESSMENT OF DEEP INJECTION WELLS USED TO DISPOSE OF HAZARDOUS WASTE

PRELIMINARY FINDINGS

In 1981, the Office of Solid Waste of the U.S. Environmental Protection Agency (EPA) conducted a survey of hazardous wastes management practices by sending questionnaires to owners and operators of facilities who had notified the Agency that they handled hazardous wastes, pursuant to notification requirements under the Resource Conservation and Recovery Act (RCRA). This survey identified 73 hazardous waste injection facilities used to dispose of an estimated 7.3 billion gallons of waste in that year. At the same time, in early 1983, several bills were introduced in Congress that would have mandated an EPA study of all wells used to dispose of hazardous waste, and questions were raised about the extent and safety of the practice.

In the Summer of 1983, the Office of Drinking Water (ODW) responded to these concerns by conducting a survey and assessment of hazardous waste injection practices. In order to obtain a comprehensive inventory of all wells used to inject hazardous wastes, Regional EPA offices were provided with a questionnaire, which was either transmitted to the States or answered by the Regional staff with the help of a contractor. At the same time, in August and September of 1983, personnel from EPA headquarters, Regions and States jointly visited 20 hazardous waste disposal facilities, believed to include hazardous waste injection wells and chosen to represent a cross-section of geographic areas, wastes characteristics and type of operations. Hazardous wastes were, in fact, injected at only 17 of these facilities, which accounted for a total of 53 wells. The waste streams injected at the other three facilities were not hazardous.

The questionnaire devised by ODW listed data elements regarding owner/operator identification, operational status, geology of injection and confining formations, hydrogeology, well design and construction, operation, testing and monitoring, inspection and surveillance, permit status and limitations. This questionnaire was filled out on site and the information verified to the greatest extent possible for the 17 facilities where site visits were made. For all other wells the questionnaires were filled using data available in State files.

The results of the study, which are now being analyzed and verified, will be published early next year. This paper discusses some of the preliminary findings as they pertain to the number, age, distribution, and general characteristics of injection wells used to inject hazardous wastes. It also briefly reviews the regulatory framework under which hazardous waste injection wells are operating and ODW's position on injection wells.

General information

The inventory revealed that there were, as of October 1983, 188 active Class I hazardous waste injection wells (Class I HW wells) distributed among 102 facilities. Active wells are those that received waste at some time during 1983, either on a continuous or intermittent basis as well as stand-by or back-up wells in operational condition.

Class I wells are defined in the Agency's Underground Injection Control (UIC) regulations, as wells used to inject wastes below all underground sources of drinking water (USDW), i.e. all aquifers in which the water contains less than 10,000 mg/1 total dissolved solids. Class I wells represent only a small proportion of the wells used to dispose of waste. The vast majority of disposal wells are in fact used to dispose of oil field brines. EPA's inventory shows that 5,399 of these wells are currently active in Texas alone. In contrast there are only 649 Class I wells in the inventory and approximately 75% of these are used to inject wastes that are not defined as hazardous under RCRA.

More than 90% of the Class I HW wells are "on-site" wells, that is, they are owned and operated by the waste generator. Only 10% of the wells are commercially operated facilities that collect a service fee for the disposal of a variety of wastes. These are usually referred to as "off-site" wells, and active ones are located in Louisiana, Ohio, Oklahoma and Texas.

Wells used to inject hazardous wastes are concentrated in a few areas of the country (Figure 1). A vast majority of the wells are located along the Gulf Coast and near the Great Lakes. Louisiana and Texas alone account for 62% of the wells. Other States with sizeable numbers of HW wells are Michigan, Indiana, Ohio, Illinois and Oklahoma. In general, the wells are located in areas of oil and gas production where data on deep formations are readily available.

The majority of the wells active today were drilled in the mid-1960s to the mid 1970s (Figure 2). There was a peak in start-up of injection wells in 1973, 1974, and 1975, probably as a result of the implementation of the Clean Water Act which established stringent pollution control requirements for discharges to surface waters. The enactment of RCRA, on the other hand does not seem to have had an effect so far on the well population. This may be due to the fact that for approximately two years, between the effective date of the RCRA regulations (August, 1980) and the time the first UIC programs in States were approved (January, 1982), HW injection wells were in a regulatory limbo, with construction of new wells prohibited under RCRA (because no HW facilities would be constructed without a federally-approved permit) and the permitting requirements devised under UIC not in force until State programs were specifically approved.[1] The fact that some wells were constructed during that period may be due to lag time between permit issuance and start of construction.

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[1] EPA did promulgate under the authority of RCRA, 40 CFR Part 267 which would have allowed Regional Administrators to issue temporary RCRA permits to injection wells. These provisions were never used.

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DISTRIBUTION OF CLASS I HW INJECTION WELLS

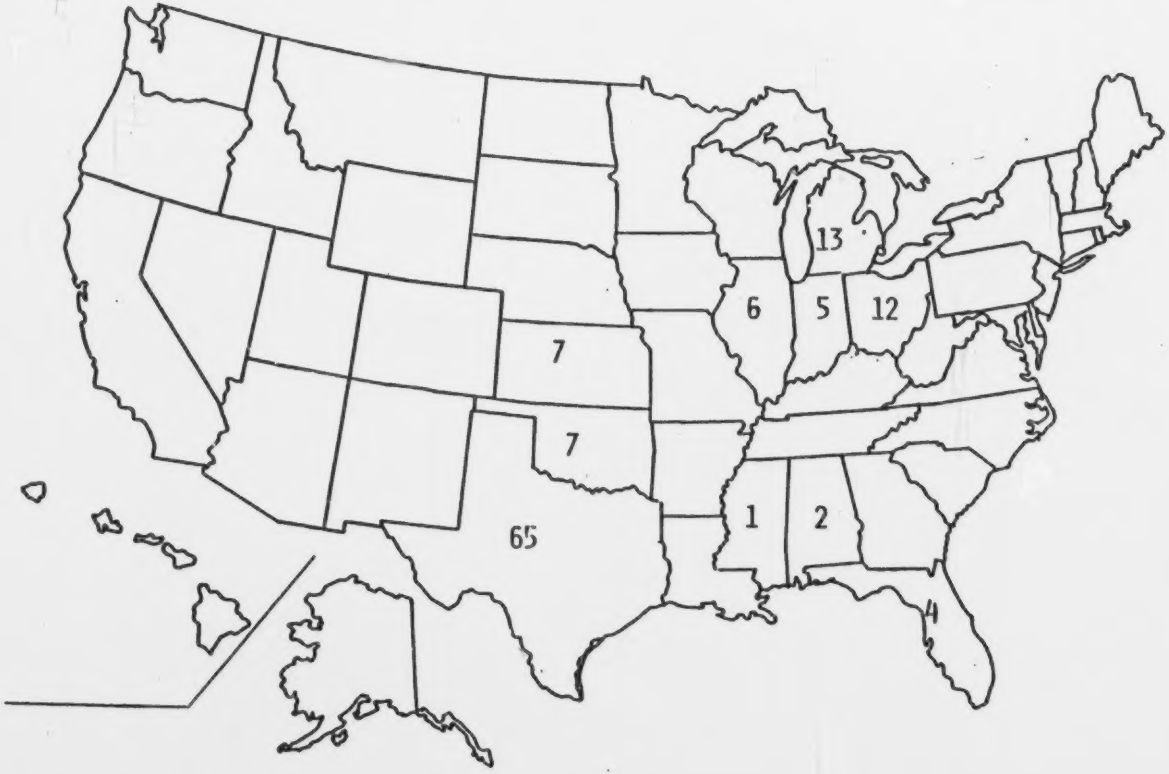

FIGURE 1

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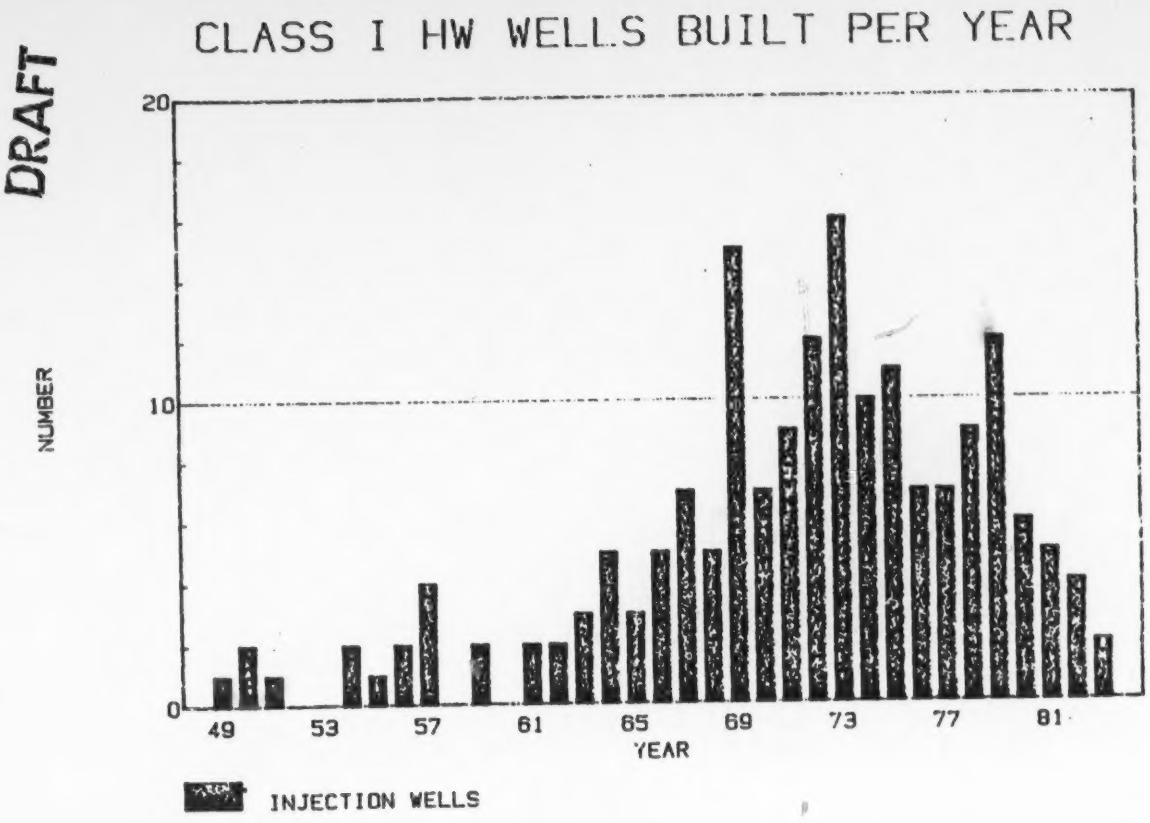
CLASS I HW WELLS BUILT PER YEAR

FIGURE 2

Verified data available on 124 Class I HW wells show that 7.54 billion gallons of hazardous waste were injected in 1983 in those wells. In addition, we have verified average injection rate data for 43 wells which would account for an additional 3.36 billion gallons of hazardous waste assuming constant injection. The biggest user of HW Class I wells is the chemical industry (Figure 3). Manufacturers of organic chemicals account for 43 percent of the injected wastes, while the petroleum refining and petrochemical industires account for 20% of injected volume. Twenty-eight percent of the injected wastes are generated by other chemical manufacturers. Only four percent of the total volume of injected waste is handled by commercial (off-site) waste disposers.

Well design and construction

The inventory revealed that Class I HW wells are in fact, deep injection wells (Figure 4). With a few exceptions these wells are completed below 2,000 ft. the average depth of all wells is approximately 4,000 feet. The deeper wells are found in Texas and Mississippi where the depth usually exceed 4,500 feet.

The study found that all HW injection wells are constructed with redundant protective features (Figure 5). All the wells are constructed with at least two strings of casings. The surface casing extends below the base of 10,000 mg/1 TDS water in 57% of the wells, is usually carbon steel and is cemented back to the surface. The long string casing extends from the surface to the injection zone and is cemented all the way to the surface in 74% of the wells. In the other wells above the injection zone along fresh-water bearing strata. It is usually carbon steel although other materials such as stainless steel, special alloys and fiberglass were also encountered. In addition, thirty five percent of the wells have an intermediate string of casings. In all cases injection is through a tubing. The typical injection tubing is 5.5 in. in diameter and is carbon steel. Thirteen percent of the wells had fiberglass tubing, 10% fibercast and 5% stainless steel. In 93% of the wells the tubing is set on a packer at or near the injection zone, the other wells use a fluid seal to prevent upward movement of fluids in the tubing/casing annulus. It would take a simultaneous failure of at least two of these elements for the injected wastes to reach the environment.

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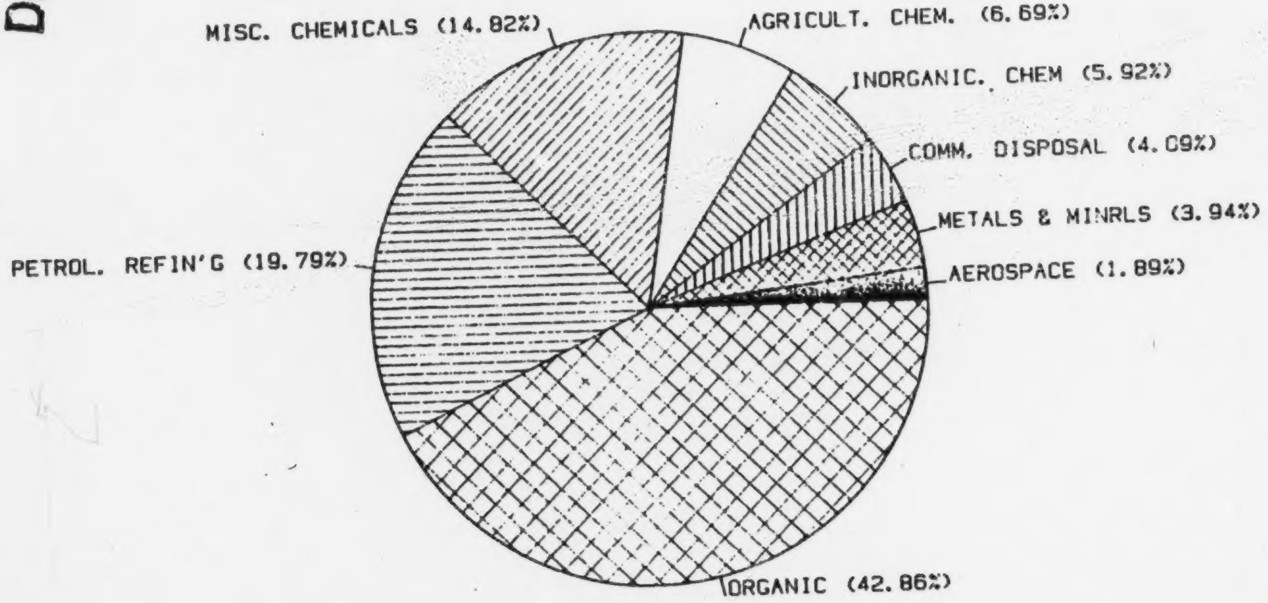
INDUSTRIES USING CLASS I WELLS



TOTAL CAPACITY (MGY)
11.7 THOUSAND
FIGURE 3

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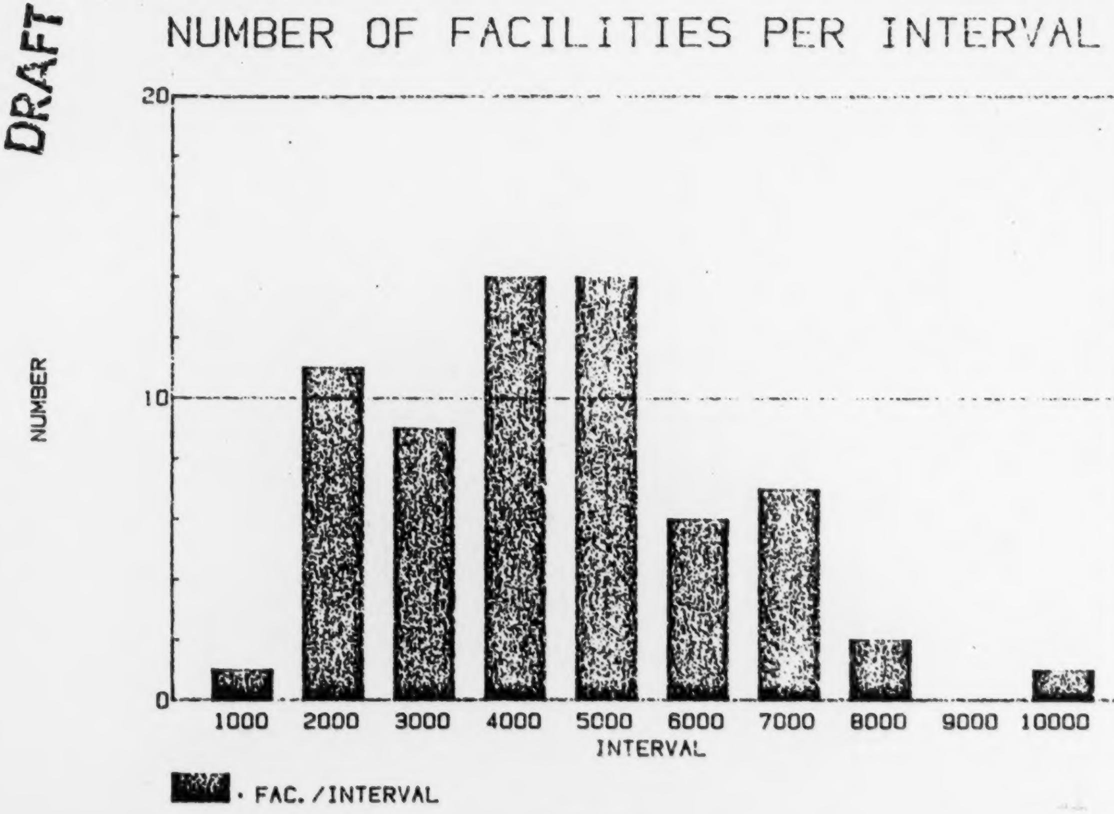

FIGURE 4

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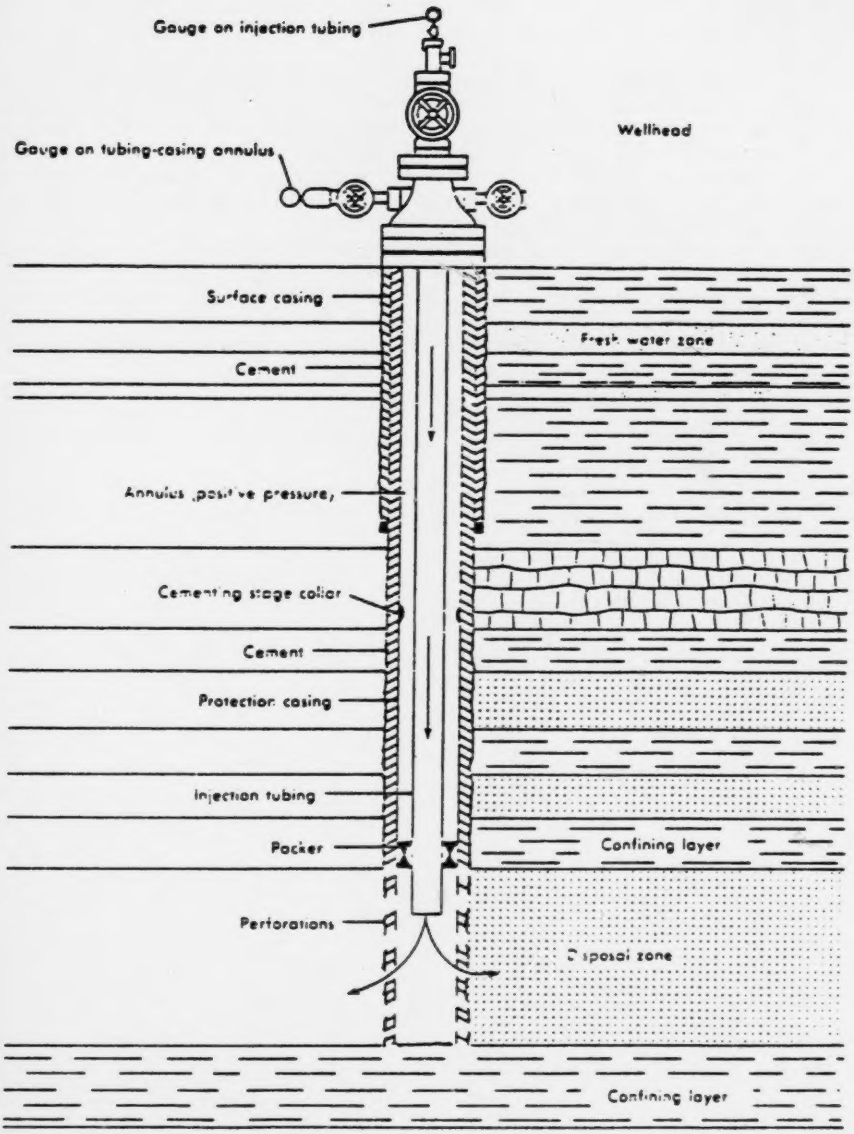

Typical Industrial Waste Disposal Well

FIGURE 5

Hydrogeologic setting

A vast majority of the Class I HW injection wells (71%) are completed in sand and sandstones formations, 15% are completed in carbonate formations (porous limestones or dolomites) and the remainder in shaley sandstones. Most of the confining zones are composed of shales (66%), followed by shaley sandstones (14%), and shaley limestones (12%). Other examples of reported confining zones are silt, clay and massive dolomites.

In the Great Lakes Area, the disposal zone is usually the Mount Simon formation, a 600 to 700 foot thick sandstone found at approximately 3,000 feet of depth. Confining beds of limestone, dolomite and siltstone approximately 1,300 feet thick separate the Mount Simon from the base of 10,000 mg/1 TDS water. In Texas and Louisiana, the injection zones are typically unconsolidated sediments of tertiary age and are more than 4,000 feet deep. They are separated from the base of fresh water by one to two thousand feet of shales and shaley sandstones.

The data show that in most instances there is good separation between the injection zone and the base of 10,000 mg/1 TDS water (Figure 6). In approximately fifty percent of the cases this distance is more than 2,500 feet. There is of course greater separation from the base of 3,000 mg/1 TDS water, the outer limit of water usually considered useable as a source of drinking water. This distance is greater than 3,500 feet in approximately 70% of the wells in the inventory.

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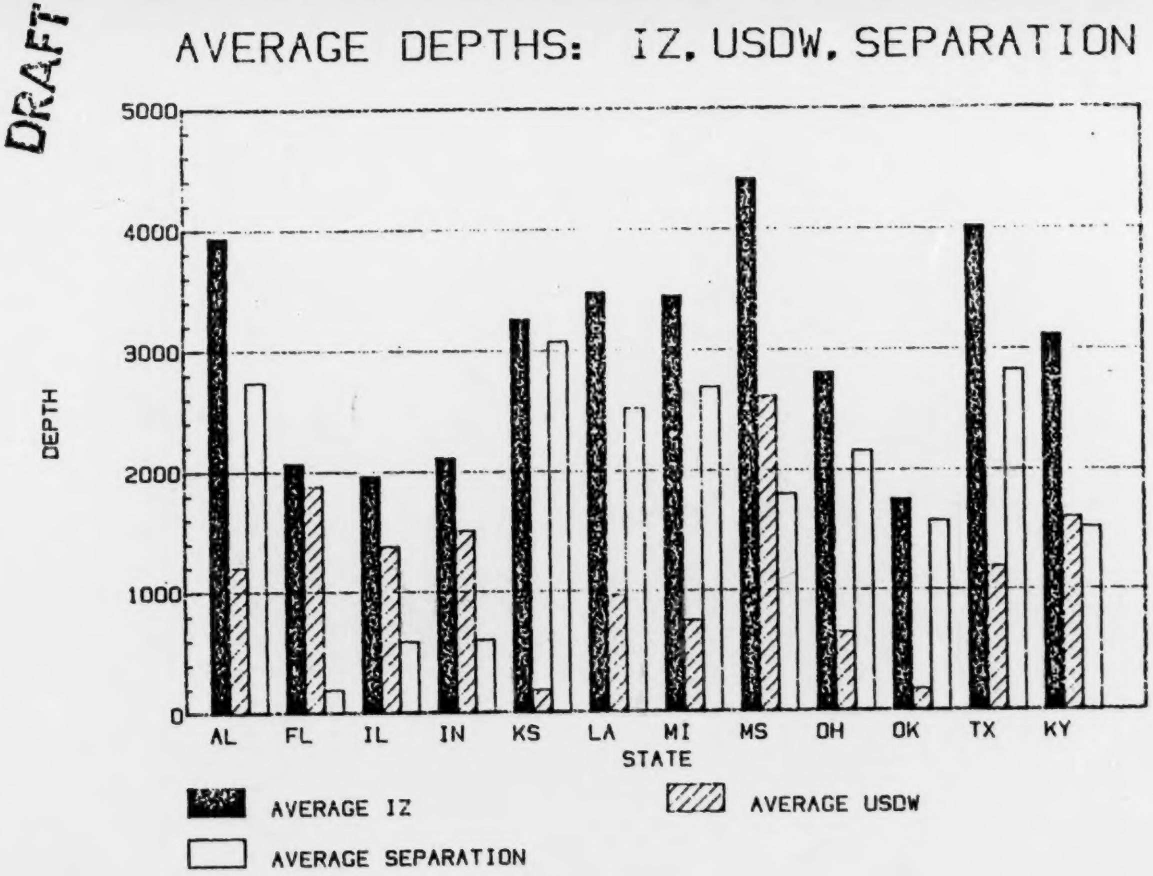

FIGURE 6

Well operation

It was difficult to characterize the types of wastes injected in HW Class I wells, because they are usually mixtures of individual wastes streams and are diversified. Furthermore, the data available in State files on this subject were often sketchy. Better data were obtained during the site visits. Approximately 70% of the injected streams at these facilities were acidic, with hydrochloric acid the most common component. Generally, wastes streams are treated and blended prior to injection. The most common treatments were sedimentation, disinfection, filtration, oil and grease removal, neutralization and dilution.

All injection wells have a limitation on the injection pressure. This limitation is in all cases set below the fracture pressure of the receiving formation, and is usually calculated based on a hydraulic fracture gradient. Twenty percent of the wells in the inventory injected waste by gravity flow.

All operators monitor injection pressure, flow rate and cumulative volumes in most cases using continuous monitoring devices. In approximately 90% of the wells the tubing-casing annulus is filled with fluid upon which positive pressure is applied. The pressure is monitored continuously to detect leaks in the tubing casings or packer. The majority of the assessed facilities had an automatic shut-off system that is activated whenever one of the monitored parameters reaches a given level.

The data show that wells are extensively tested prior to being put in operation in order to ascertain the mechanical integrity of the well. The integrity of the tubular goods was tested by pressure tests, caliper logs or radioactive tracer surveys. In all the sites visited a test such as cement bond, velocity or temperature logs had been run to confirm the soundness of the cementing job. The review of State files revealed that similar tests had been run in most of the wells in the inventory. In addition, all but a few of the assessed facilities have implemented corrosion control methods in order to preserve the integrity of the well materials. These include use of corrosion resistant materials and addition of corrosion-inhibiting fluid to the annulus. Two of the facilities visited have installed systems whereby samples of well materials are exposed to the waste stream in a loop accessible from the surface. The well materials are weight-tested at regular intervals to give early warning of corrosion. The UIC regulations also require periodic testing of mechanical integrity during the life of the well. This practice is already in place in most of the facilities assessed, with some facilities running yearly tests. The assessment confirmed ODW's belief that mechanical integrity testing is a most valuable tool in ensuring protection of underground sources of drinking water. In two cases where the casing was deteriorating, these tests demonstrated the need for well repair before any fresh water had been affected.

Regulatory framework

Class I HW injection wells, like all other injection wells are subject to the requirements of the UIC regulations promulgated under the Safe Drinking Water Act, and administered either by States or by EPA. When a UIC program is promulgated or adopted in a State all existing Class I wells must be repermitted, in accordance with the Federal requirements. Most of the Class I HW wells are located in States that have received primacy. In those States owners/operators of existing wells must submit a permit application within 4 years of the effective date of the program. (This period is shortened to 6 months for off-site wells). Two of these states, Texas and Louisiana, which account for the majority of the HW Class I wells were among the first to receive primacy (Texas in January 1982, and Louisiana in April 1982) and have issued permits that meet the Federal requirements to 41 wells. Most of the other States have put Class I HW wells at the top of their priority list and will review existing wells within the first two years of the program. EPA has direct jurisdiction over 13 facilities in Michigan, Indiana and Kentucky for a total of 21 existing wells. In these States, the regulations require that owner/operators of existing wells submit permit applications during the first year of the program, and plans are to review these applications on an expeditated schedule. In addition, Class I HW wells are by statute subject to regulations under RCRA. A UIC permit issued by EPA or a primacy State is deemed to be a permit by rule under RCRA, but only applies from the wellhead down. Any surface facilities associated with the well must be permitted under RCRA.

Conclusions

One of the conclusions of the survey is that, even though the UIC program is only now being implemented across the board, most of the Federal UIC requirements were by-and-large already applied by the states where Class I HW wells are located.

The practice of using injection wells to dispose of waste started in the oil fields in the 1930s and is considered an environmentally desirable method for disposing of oil field brines and other waste fluids resulting from oil and gas production. Injection of industrial waste started in the late fifties and so far has proven a reliable method for disposing of certain wastes. Recent studies by the National Research Council, the General Accounting Office and the Office of Technology and Assessment have all cited waste injection as an inherently better technology than other methods of land disposal of wastes. Only one Class I well is associated with a site on the National Priority List of Superfund sites. Injection at this particular site stopped in the early 70s and examination of the data indicates that the well would not have been in compliance with the current UIC requirements. There have been other problems associated with injection wells, but none that have led to contamination of drinking water. All of the problems occurred before the UIC regulations were in place and could have been avoided if the UIC requirements had been met. They can be tied to improper siting, excessive injection pressures, and lack of monitoring for mechanical integrity.

As we review the results of the Study and gather more information on how injection wells are currently operating, we may generate additional guidance and if appropriate added regulatory requirements. The assessment has shown us that some operators and States already go beyond the minimum standards of the UIC regulations and we will want to ensure that best technology is applied for all HW injection wells.

What we have seen so far leads us to believe that while injection wells are not a panacea, when properly sited, operated and monitored, and for the types of wastes that lend themselves to the technology, they can be an environmentally sound method of disposal. We also believe that injection wells must be examined on a case-by-case basis, since the interaction between the hydrogeologic setting, construction material and type of waste injected must always be considered in making a determination of the adequacy of the technology.

The CHAIRMAN. Obviously, we are going to move as quickly as we can, as I have indicated. And we hope someone representing EPA and Treasury will be available on Friday morning when we have another series of witnesses.

Senator DANFORTH. Can I ask one question?

The CHAIRMAN. Yes.

Senator DANFORTH. Mr. Rollyson, there has been some discussion of using a surtax on the major industrial corporations as a method of raising the necessary funds while spreading the burden more fairly than the feed-stock tax. Has the administration given this alternative any thought?

Mr. ROLLYSON. We have only recently heard about this proposal. But our initial reaction, I think, is unfavorable. I think a point that I made to Senator Bentsen earlier is that if you are seeking to broaden the base, a surtax on corporate income or some sort of tax on gross receipts of corporate income picks rather arbitrarily to impose that broader tax on those corporate taxpayers. If the goal is to significantly broaden the base, it would be simpler and, I think, more fair to simply take that money out of general revenues.

Senator DANFORTH. It could be administered, though, right?

Mr. ROLLYSON. Oh, yes, it could be administered. Yes.

Senator DANFORTH. Just, in other words, in your view the question is one of equity rather than administration?

Mr. ROLLYSON. That's correct.

The CHAIRMAN. Senator Long.

Senator LONG. To me this is an environmental problem, and I can't look upon this as being the only environmental problem we have to contend with. For example, I look at the acid-rain problem. I have heard some of the arguments by those who are concerned that they don't want their industries to be taxed in their States to do whatever some of us might think would clean up the acid rain.

They make the point that if we put a very heavy tax on them, they are just going to go out of business and they are not going to be able to do what we had hoped for them to do because they are not in a very favorable shape financially. So I find myself thinking if we are going to do about acid rain what we have to do, we may have to do it with general revenues.

I'm not talking about just doing it out of the deficit. I mean, again, just raise taxes from whatever source we can best raise it from and carry the burden. And that could be anything. It could be an income tax. It could be a sales tax. It could be just anything that the good Lord might look favorably upon at that particular moment. [Laughter.]

Senator **MITCHELL**. More religion and politics. [Laughter.]

Senator **LONG**. And I find myself thinking—don't we often times think about taxing the beneficiary? Not taxing the person who theoretically caused the problem, but taxing the people who benefit from having the problem addressed. A lot of people who caused these dumps, and these waste sites, and are no longer there, and no longer in business.

Might it not be that we are going to have to salvage the environmental problem by looking to the overall tax burden to support whatever is necessary to carry out an overall Government policy.

I would like for you to say it for the record. I see you nodding.

Mr. **ROLLYSON**. I agree. I think that is what we have been discussing in large measure here today. That this is a benefit to the society at large. It would nice if we were able adequately to target the tax to the abusers, to those who create the problem. That is very difficult to do both from a practical standpoint, and, I think, from a pure knowledge standpoint. We don't know what all the hazardous chemicals in the world are. And we don't know who produces them. And we don't know what the long-term effects are. But I think there is much to be said for viewing this as a larger societal problem.

Senator **LONG**. Thank you, very much.

Senator **BOREN**. Mr. Chairman, if I could just follow up briefly on what Senator Long just said. And I apologize if this has already been asked. Have you done a study in terms of the regional impacts of the costs, the per capita impact of the costs, in terms of the formula now in the bill and the way the money would be raised? I think Senator Long raises a very good question. He makes a point in terms of acid rain where we want to try to avoid unfair regional impacts. And that the costs and the benefits of this program the way it is now devised, may be very unequally spread. And we certainly see that in the southwest, for example, where it appears that a heavy concentration of the cost would be. Have you run any figures on per capita tax burden by State at all?

Mr. **ROLLYSON**. No, we haven't, Senator.

Senator **BOREN**. Would that be possible to do?

Mr. **ROLLYSON**. Under which assumptions? Under the H.R. 5640 assumptions?

Senator **BOREN**. Well, maybe look at both alternatives and see.

Mr. Rollyson. We would have to look at the assumptions and then we could come up with something.

Senator Boren. I think that would be very helpful to us in terms of determining equity if we have that kind of information available to us.

The Chairman. Could I just interrupt? We are going to have other witnesses, and we have a vote starting at noon.

We hope to complete everything by then, but we may not be able to do that obviously.

I think I will start with the next panel, and then we can maybe vote and come right back.

I would like to raise one other question. Yesterday in discussing with Senator Mitchell and Senator Cohen after certain amendments were adopted with respect to the footwear industry—we were asked if we could again request another ITC study. Now I have addressed the letter to the ITC, but I understand that it would be better to have a resolution. I understand Senator Mitchell has such a resolution.

Senator Mitchell. I do, Mr. Chairman. This would simply call upon the ITC to conduct another investigation of imports in the footwear industry, which now may be reaching close to 80 percent of the domestic market. It would call for the investigation to commence on or about November 1.

Senator Long. Mr. Chairman, when we go over to vote——

The Chairman. Is there any objection to that resolution?

Senator Danforth. I'd like to comment on it.

Senator Long. I'm not involved in the resolution. I just want to make a statement about what is on the floor.

I will be involved in the vote that occurs on the floor so I can't come right back immediately, and I would like to hear the witnesses of the next panel. I wonder if the Chair could name a time certain to come back, give us enough time to get that vote behind us, and see what happens immediately thereafter. If it is in the power of this Senator, I will be here. The usual course is that when you break and come back at noon, you have very few troops. But I will be here provided I'm not tied down on the floor.

I wonder if the Chair could just give us a time certain to resume the hearing.

The Chairman. I think all the witnesses are from DC. Is that correct? Are you all available this afternoon? Your meters are running and all that? [Laughter.]

Senator Long. I think they are all being paid, everyone of them. Probably by the hour.

The Chairman. Probably like to stay all day. [Laughter.]

I have to run down and make a little speech. It won't amount to much. [Laughter.]

And I can't take the money. Two-thirty, is that all right?

Senator Long. That will be fine.

The Chairman. We will not ask that panel to start. I think Senator Long has a big interest in the pendihg matter, which is TV in the Senate. And he has an interest in not having TV in the Senate. So you want to be there for that.

Could we take care of the resolution?

Senator DANFORTH. Mr. Chairman, yes. I think that the resolution is fine. I think that the effect of the resolution is in direct proportion to whether or not we are going to get the trade bill enacted into law. To ask the ITC to reopen the footwear case and to get a successful conclusion of that reopening is very closely tied to whether we give them a new legal basis for reaching their conclusion. The amendment that was offered on the floor would do that. Senator Mitchell was a leading author of that amendment. But we have to pass that trade bill. And I think unless we pass that trade bill, I'm concerned that the ITC reopening the case may be a dry run.

The CHAIRMAN. I think that's obvious. If we don't pass the bill, I'm not certain I would suggest the ITC disregard the resolution. But can we pass the resolution?

Senator LONG. Mr. Chairman, let me just say that this is not just a minor matter here. It is a significant resolution. I think it's worthy and I think it's fair and I think the footwear industry deserves this consideration and I will vote for it. I don't think it's a minor matter.

The CHAIRMAN. It isn't minor in that sense. So without objection, the resolution is agreed to. And what we will do is send a letter to the ITC, a resolution to be signed by Senator Long and myself.

Thank you very much.

Senator MITCHELL. Thank you.

The CHAIRMAN. If anybody has additional questions of the two witnesses, we can do that until noon.

Senator MITCHELL. I just wanted to say this. Senator Symms referred to my remarks to Mr. Thomas, and I wanted to make clear that my remarks about lack of administration effort were in the context of the victim compensation provision. And as Mr. Thomas knows, I have said privately and publicly to him that I think he has done a good job in getting this program, the cleanup aspect of the program, moving. And I want to make clear there is no misunderstanding on that.

The CHAIRMAN. Is there anything else either witness has to offer without being asked a question? [Laughter.]

I wouldn't recommend it. [Laughter.]

All right. We will be back at 2:30.

[Whereupon, at 11:55 a.m., the hearing was recessed and scheduled to reconvene at 2:30 p.m.]

AFTERNOON SESSION

The CHAIRMAN. Let me call the next panel. And as I do, I think Senator Roth would like to introduce one of the members of the next panel.

Senator ROTH. Thank you, Mr. Chairman

I am very pleased to see as a member of the panel representing Chemical Manufacturers Association. And please would the panel come forward.

The CHAIRMAN. In addition to the one that Bill is introducing, we have: Dr. Harvey Alter; Urvan Sternfele; Ed Merrigan, Suellen Pirages.

Senator ROTH. That's pretty good for us, Bob. In any event, I'm delighted to see Bob Forney, an old friend and community leader of Delaware. He is currently serving as an executive vice president of Du Pont Co., a small chemical company headquartered in Wilmington, DE. Bob is a very thoughtful, able business executor. And as I have already indicated, a community leader involved in many problems and charitable works in the State of Delaware. So I want to personally welcome you here, Bob.

Mr. FORNEY. Thank you.

The CHAIRMAN. And unless there is some objection, we will proceed in the way the witnesses have been called. Mr. Forney, you are the leadoff witness. And if I could ask the witnesses to summarize their major statements, they will be included in the record. That will give us some time for questions.

STATEMENT OF ROBERT FORNEY, SENIOR VICE PRESIDENT, E.I. DU PONT DE NEMOURS & CO., WILMINGTON, DE, ON BEHALF OF CHEMICAL MANUFACTURERS ASSOCIATION, WASHINGTON, DC

Mr. FORNEY. Thank you, Mr. Chairman.

As my good friend, Senator Roth, said, I'm Robert Forney from Du Pont, and I'm speaking today for the Chemical Manufacturers Association.

We believe the superfund program should proceed with an increased funding level for another 5 years. But—and I will make just three points.

The funding should be consistent with annual EPA spending needs estimated by EPA at somewhere between $850 million and $1 billion. Cleanup from these funds, plus industry financed cleanup that don't need Superfund moneys at all, will enable rapid, efficient progress on these site disposal problems.

Second, the increased funding must come from a broader tax base. Our members now pay virtually all the Superfund taxes, while many other industries have contributed to the disposal of waste of Superfund sites. We will suffer severe economic impact if we continue to be essentially the only source of higher funding levels as in the House bill.

The massive and wholy inequitable taxes of that bill will severely disadvantage us opposite our foreign competitors, and worsen an already deteriorating trade balance.

Third, this committee should reject proposals which would divert superfund from its cleanup goals; particularly, the proposal to fund a trial national health insurance program.

I have limited my summary to one minute, and would be glad, then, to respond later to questions, Mr. Chairman.

The CHAIRMAN. Thank you very much. If we can just hear the entire panel.

[The prepared written statement of Mr. Forney follows:]

CMA
CHEMICAL MANUFACTURERS ASSOCIATION

STATEMENT OF
ROBERT C. FORNEY
EXECUTIVE VICE PRESIDENT
E. I. DU PONT DE NEMOURS & COMPANY

ON BEHALF OF THE
CHEMICAL MANUFACTURERS
ASSOCIATION

BEFORE THE
COMMITTEE ON FINANCE
UNITED STATES SENATE
ON SUPERFUND REAUTHORIZATION

September 19, 1984

2501 M Street, NW • Washington, DC 20037 • Telephone 202/887-1100 • Telex 89617 (CMA WSH)

The Chemical Manufacturers Association is a nonprofit trade association whose member companies represent more than 90 percent of the productive capacity for basic industrial chemicals in this country. In several appearances before both House and Senate committees since November of 1983, we have stressed both our strong support for an effective national program to clean up problem waste sites, and our commitment to play a cooperative and constructive role in the process leading to Superfund reauthorization. We are pleased to return to Congress to present our views on the appropriate way to reauthorize Superfund.

In our previous statements, we have testified that Congress should reauthorize Superfund by (1) determining realistically what EPA's annual funding needs will be, and providing for such levels; (2) deriving these funds from a more broadly based mechanism than the tax structure of the current law; (3) providing this funding for a five-year period so the needs can be reexamined; and (4) re-enacting the current law unchanged in all other respects.

In light of this Committee's jurisdiction, in this statement we will emphasize the crucial taxing and funding issues. In this Committee's notice of September 7, 1984 announcing this hearing, the Committee announced its "particular interest" in exploring the proper size of the Superfund and the "impact that tapping particular revenue sources would have on affected industries." As our industry is by far the most affected under the current law and under other proposals now pending in Congress, we believe that our views should be of particular interest to the Committee.

We will stress in this statement our strong objections to the funding levels and mechanisms contained in H.R. 5640, the Superfund reauthorization proposal which passed the House on August 10, 1984, and which has been referred to this Committee. (Similar funding levels are contained in a bill introduced by Senators Bradley and Lautenberg on August 10, 1984 (S. 2959) and our objections are accordingly directed to that bill as well.)

As this Committee stated in its September 7 notice:

> [T]here has been considerable evidence that the haste with which the House acted required sudden, and not necessarily well-informed, decisions on many of these [funding] questions. In our Committee we want to avoid mistakes the House may have made and determine how best to raise money for Superfund in a fair, efficient, and sensible manner. [Emphasis added.]

We congratulate this Committee on its resolve to develop its own approach to funding levels and taxing mechanisms, and we encourage the Committee to reject outright the provisions of H.R. 5640. The funding provisions of H.R. 5640 simply meet none of this Committee's tests for "fairness, efficiency, or sensibility."

First and foremost, H.R. 5640 goes far beyond what is needed to reauthorize Superfund for the next five years. Estimates based on EPA's data and more recent EPA testimony before House and Senate Committees show that EPA can effectively use a maximum of $850 million to $1 billion per year for the next five years. Despite this data and testimony, H.R. 5640 would raise well over $2 billion per year in taxes. Second, H.R. 5640 would continue reliance on the unfair petrochemical industry "feedstock" taxes as the primary source of funding, and at the much higher taxing levels proposed, greatly magnify the problems of that narrow-based approach. Such dramatic tax increases would have a severe adverse economic impact on narrow segments of our industry. Third, H.R. 5640 fails to include a national waste disposal tax to broaden the base of the funding, even though H.R. 5640 declares in its section on "Findings and Objectives" that it is "necessary" to enact such a tax. (§3(8) of H.R. 5640).

Moreover, in light of EPA's data and testimony, this Committee should also reject the funding proposals contained in S. 2892, recently reported by Senator Stafford's Committee. While the funding levels of S. 2892 are lower than those of H.R. 5640, they are still far in excess of EPA needs and they will have similar unfair and unnecessary adverse impacts on a narrow segment of industry.

In Part I of this Statement, we will point out the serious adverse economic impact of taxing a narrow segment of the industry at unnecessarily high levels. In Part II, we will discuss the appropriate annual funding levels for Superfund reauthorization. In Part III, we will present our proposal for funding mechanisms to attain these annual levels. In Part IV, we will describe in some detail our proposal for a workable and effective national waste disposal tax. In Part V, we will describe the problems we have with several of the non-funding elements of H.R. 5640 (and its companion, the Bradley-Lautenberg Bill, S. 2959), and with several of the non-funding elements of S. 2892 (the Bill recently reported by the Senate Environment and Public Works Committee).

I. Economic Impact on the Chemical Industry

Under the Superfund law which will expire next year, 87½% of the funding comes from special industry taxes designed to raise approximately $307 million per year. These taxes are imposed on organic and inorganic chemicals and crude oil, and are commonly referred to as "feedstock" taxes.

The feedstock approach as now designed and operated is extremely narrow-based. In fact, CMA's members pay virtually all of the Superfund feedstock tax collections. And even within the chemical industry the tax burden is distributed in a distorted fashion. Only 12 companies pay almost 70 percent of the feedstock taxes collected on petrochemicals. Yet it has been Industrial America -- not just a few petrochemical companies -- which has disposed of the wastes being cleaned up under Superfund. At the multi-party sites EPA is now addressing, we continually see large shares of waste from companies in the electronics, auto, aircraft, steel, and other basic manufacturing industries.

With our chemical industry tax and liability payments of the last four years, with the increased taxes we are willing to pay under our proposal in Part III of this Statement, and with the liability payments that are certain to continue into the future, we hope Congress recognizes that our industry is paying dearly for the Superfund program. However, we must emphasize that trying to raise taxes at much higher annual rates from our industry will have significant adverse effects on our industry and have spillover effects on the economy as a whole.

A. Changes in Economic Condition of the Chemical Industry Since 1980

Since the Superfund feedstock tax was passed in 1980, there have been significant changes in economic and competitive conditions for the chemical industry. The petrochemical sector, which bears the burden of the feedstock tax, has been especially hard hit during this period. For example, the petrochemical sector's 1983 sales were only 85% of the 1980 level on which the current feedstock tax was originally based. This sector lost approximately $400 million in 1982 and was barely at the break-even level in 1983. Chemical employment has dropped by 50,000 from 1979 to 1983, and 43,000 of these job losses came from the petrochemical sector.

Primary petrochemicals and their derivatives have contributed significantly to exports and to about half of the very favorable chemical trade balance. However, the positive chemical trade balance has declined from $15 billion in 1980 to $10.6 billion in 1983, a decrease of 29%. Moreover, the decline appears to be accelerating: the 1983 trade balance was $2 billion below 1982, a drop of 16% in one year.

The serious problem of our industry's deteriorating trade balance is being caused by both declining exports and increasing imports, and an increase in the Superfund feedstock tax will only worsen these problems. During the 1980-1983 period, exports declined from $24.4 billion to $22.7, a drop that contributed $1.7 billion of the $4.4 billion trade balance reduction. Because of the ready transportability of chemicals, world markets for chemicals are highly competitive. Profit margins are razor-thin. The strengthening of the dollar during the '80-'83 period has certainly been one factor limiting exports. But we are also being hurt in world markets because the products we export must compete against those of foreign producers who do not have to pay the Superfund tax. The Superfund tax hits petrochemical raw materials the hardest, and these are the building blocks eventually needed to make most other chemical products, including derivative products which are exported.

Foreign chemical imports into the United States also are increasing at a very steep rate. During the 1980-1983 period imports grew from $9.4 billion to $12.1 billion, an increase of 29%. Here again we are being hurt by the Superfund tax. We must compete against imports from untaxed foreign producers. Imported downstream derivative chemical products, which are made from non-taxed foreign raw materials, do not have the feedstock tax built into their price structure.

During the 1980-1983 period, U.S. exports of chemicals to Europe dropped by $0.9 billion and imports from Europe increased by $1.2 billion. European producers do not pay a Superfund tax. Their exports into highly competitive world markets are booming. Last year European chemical exports expanded by 30%. European imports declined 20%, a good part of this hurting U.S. producers. The net result was that Europe's chemical trade balance in 1983 grew by 15%. At the same time, the U.S. chemical trade balance dropped by 16%.

These alarming trends in chemical exports and imports are continuing in 1984. Based on data for the first four months of this year, we expect that the decline in the net balance for 1984 will again exceed $1 billion. The continuing decline in chemical trade is robbing the chemical industry of the growth it would otherwise be enjoying, with all the attendant benefits to employment and local economies throughout the U.S. Moreover, we are just beginning to feel competition from new low-cost producers in the Middle East and expect to feel the full impact of this new competition in the second half of this decade.

Given this outlook, the sizeable decline in trade that has been occurring since 1980, and the razor-thin profit margins that exist, it should be clear that increasing the Superfund feedstock tax is the wrong thing to do if the U.S. chemical industry is to remain competitive in world markets.

B. Impact of Increased Feedstock Tax in H.R. 5640

The proposed feedstock tax increase in H.R. 5640 ignores the depressed state of the major primary petrochemical tax base and the negative economic impact of dramatic increases in primary petrochemical tax rates. Under H.R. 5640, inorganic chemical tax rates are raised over six times, and petrochemical rates are more than tripled. The petroleum tax is increased to 13 times the CERCLA rate. With the required indexing of taxes to the inflation rate, the actual cost of H.R. 5640 could exceed $12 billion rather than the $10.2 billion estimated by the House Ways and Means Committee. Further, the ultimate tax rates as a percent of selling price would exceed the median margin of U.S. companies manufacturing the taxed chemicals.

A study prepared for CMA by DeWitt and Company reports on the adverse economic impact that Superfund taxes could have on the primary petrochemical industry and its ability to provide the projected tax revenue. This assessment, combined with petrochemical man-power relationships developed by Arthur D. Little, leads to the following conclusions:

- Feedstock taxes are not borne by foreign competition and the result will be losses in both export and domestic markets.
- The margin between primary petrochemical costs and prices is inadequate to fully cover operating costs for a typical petrochemical plant today and does not provide the incentive for new plant investment and job creation in the future.
- Excessive Superfund taxes would eliminate or jeopardize an additional 30,000 jobs in the petrochemical industry and can cause 1 million jobs in downstream dependent industries to rely upon foreign petrochemicals.

Just last week, Congress' Office of Technology Assessment (OTA) isued a statement confirming the harsh economic impact of H.R. 5640 on our industry. (OTA Statement for the Hearing Record before Senate Committee on Environment and Public Works, September 10, 1984). OTA warned that the "greatly increased rates" of feedstock taxation in H.R. 5640 pose a "definite risk of having significant negative impacts" on our industry. (OTA Statement, page 5). Specifically citing prior CMA testimony, which made the same economic impact points we made above in this Part, OTA found that "the fears of industry of such impacts appear well founded." (OTA Statement, Page 5).

II. Appropriate Annual Funding Levels

The harsh economic consequences and the major tax increases of H.R. 5640 and S. 2892 are unnecessary. As we explain in Part II(C) below, EPA spending needs over the next five years will be approximately $850 million to $1 billion per year, and industry taxes of $614 million dollars per year will be adequate to support these needs. Yet H.R. 5640 would raise well over $2 billion per year in taxes and S. 2892 would raise $1.5 billion per year in taxes.

With such substantial economic consequences involved, we urge the Committee to pursue this matter thoughtfully and fairly. We will outline below the key factors the Committee should consider in deciding appropriate funding levels, and will describe a process for determining such levels. Our essential points are: (A) funding should be approached on the basis of EPA's annual spending needs; and (B) at a great number of sites, part or all of the cleanup costs will come from private parties through the liability scheme of the statute. These considerations were apparently ignored in the development of H.R. 5640. and S. 2892.

A. Need to Determine EPA's Annual Spending Needs

Any projections as to the total national funding needs for the future can be based only on the roughest speculation at this time. EPA's current estimates can only project between 1400 and 2200 as the number of sites that will eventually be placed on the National Priorities List. Thus, the most critical component to arriving at a total funding needs projection -- the number of sites to be addressed -- cannot even be narrowed within a reasonable variability factor.

Funding should accordingly be approached on the best estimates of EPA's annual spending needs for the next five years. Under this five-year approach -- which is the time-frame Congress originally chose in enacting Superfund -- Congress may re-examine the funding needs question in the future with more complete information.

An annual funding approach based upon annual spending needs makes sense. Each site requires a phased approach of careful study, planning, engineering, and construction. Thus, in any given annual period, EPA personnel -- even with additional resources -- can be expected to process a finite number of assessments, investigations, studies, design contracts, and construction contracts. And only as these projects are processed will the need arise to obligate and expend funds.

Moreover, such an approach is fair. Especially when funds are being raised from taxes on a narrow segment of the economy, it would be unjust to force tax payments from that segment substantially earlier than the funds are needed. We note that in cleaning up the federal government's own sites, Congress provides funding from the responsible agency's appropriations on an "as needed" basis. Fairness dictates that Congress view industrial funding on a similar basis.

We urge Congress to seriously consider the testimony on this point by EPA Administrator Ruckelshaus on March 15 before a House subcommittee. Administrator Ruckelshaus warned that "additional infusions" of funding beyond EPA's capabilities "could have the paradoxical effect of retarding our activities, not speeding them up." He outlined several limiting factors on EPA's ability to perform at a greatly expanded pace, including physical and administrative limitations within federal and state governments in performing remedial investigations and feasibility studies; the need for site assessments to be performed in varying seasons of the year; limitations within the analytical laboratory industry; and the need for informed citizen participation. He concluded by warning that such "additional infusions" of money at too great a rate had the potential for "building in waste."

B. Recognition that Liability Payments Will Offset Tax Needs

A second important principle is that a significant portion of the cleanup costs will be paid for by responsible parties through the statute's liability scheme. These costs may be paid for "up front" -- by responsible parties either performing or paying for cleanup work directly -- in which case the moneys never go through the Superfund at all. Or these costs may be paid for in "cost recovery" -- by responsible parties reimbursing the fund for cleanup costs incurred. In either event, annual funding levels must be derived by accounting for these important factors. Each dollar that will be spent by or collected from responsible parties for Superfund site cleanups is a dollar that does not need to be raised through taxation.

Based on EPA's experience with "up front" settlements so far and the numbers of solvent responsible parties associated with the sites on the National Priorities List (NPL), these liability contributions will be substantial. Recent EPA figures show that even in the relatively early stages of the cleanup program, EPA has already reached "up front" enforcement agreements with private parties for full or partial cleanups for a total value of over $292 million. In roughly the same time period, by comparison, EPA had obligated $268 million dollars for fund-financed site-specific cleanup work. A significant portion of this amount will be recoverable from responsible parties. In fact, EPA now projects that it will secure such "cost recovery" at a rate of 30% of fund-financed cleanup expenditures. (See EPA's Comments to Department of Commerce, letter of Lee M. Thomas, EPA Assistant Administrator, May 11, 1984).

C. Use of EPA Estimates to Arrive at Annual Spending Needs

The only available EPA data we have seen which can be used to project Superfund needs are contained in the EPA document of December 8, 1983, entitled "Superfund Task Force Preliminary Assessment." This study estimates costs for the cleanup of all waste sites that may be placed on the Superfund National Priorities List (NPL). In Chart #3, the study assumes ranges from 1000 to 2200 sites, and projects total federal cleanup and program costs in these ranges to run from $6 to $16 billion. This study recognizes the role of "up front" liability payments in the Superfund program by assuming that 40% of the NPL sites will be cleaned up by responsible parties. These costs are accordingly not included in the $6 to $16 billion projections.

This study does not, however, contain the crucial missing number that Congress must explore with EPA: projections of annual expenditure needs. Thus EPA's "$6 to 16 billion" range is frequently cited in a highly misleading manner. Proponents of

H.R. 5640 point to the funding raised by that Bill as being on the "lower" end of this range. This overlooks the fact that H.R. 5640 would raise the $12 billion in five years and that EPA has never indicated it could use the money that fast. In fact, as noted below, EPA has made clear that it cannot.

Even though the December EPA study referenced above does not contain annual projections, one can perform a calculation with EPA's numbers to estimate annual funding needs. On page 13, the study assumed that EPA might take 14 years to complete an NPL of 1800 sites. At this rate, about 128 sites per year would be completed. This projected rate is faster than the rate under which EPA is now proceeding. For the 1800-site range, the EPA study projects total Superfund needs to be approximately $12 billion. Assuming the rate of 128 sites per year could be attained, one can divide the 14 years into $12 billion to arrive at an annual expenditure level. This number is approximately $850 million per year.

Quite recently -- on July 25, 1984 -- EPA Assistant Administrator Lee M. Thomas publicly announced EPA's own annual spending needs estimates derived from such a process. In testimony before the House Ways and Means Committee, he stated that EPA could spend approximately $1 billion a year based on the program EPA has planned with increased staffing to reach a steady state of 130 remedial actions per year. Even more recently -- On September 12, 1984 -- Mr. Thomas reaffirmed this $1 billion per year estimate in testimony before the Senate Environment and Public Works Committee. In this discussion, he provided more detailed data on the number of sites EPA could effectively address with increased resources.

Mr. Thomas' estimate is certainly in the same range as the $850 million figure we derived from the December 1983 EPA data above. And it is certainly well out of the range of the $2 billion plus in annual taxes that would be raised by H.R. 5640 and the $1.5 billion that would be raised by S. 2892.

The annual tax levels of H.R. 5640 and S. 2892 are even more excessive when one considers that not all Superfund revenues come from taxing. As noted above, EPA projects that 30% of its fund-financed cleanup expenditures will be returned to the Superfund through responsible parties' "cost recovery" liability payments. If Superfund revenues of $1 billion a year are needed, then at least $200 million of this can come from such cost recovery payments, not from taxes. Other income will come from interest on fund deposits. Therefore, the annual tax level to be raised by H.R. 5640 is not just twice, but almost three times what is needed to meet the spending level needs recently cited by Mr. Thomas.

Last week's OTA statement (cited in part I(B) above) confirms the excessiveness of the H.R. 5640 annual funding levels. Reflecting the same concerns to which Mr. Ruckelshaus testified, OTA questioned whether EPA and the states "now have the technical, administrative, and enforcement capabilities to expand and accelerate the program in ways which would assure effective cleanups." (OTA Statement, page 3.) OTA mentioned the lack of enough "well trained and experienced people such as hydrogeologists" and enough firms to perform cleanups at a greatly increased pace. (OTA Statement, page 3.) OTA concluded that in the short-term, there is an "inability of the Superfund program to spend greatly increased sums of money effectively." (OTA Statement, page 7).

III. Mechanisms to Raise Funding

Assuming EPA needs approximately $850 million to $1 billion per year to run an effective waste site cleanup program for the next five years, the next question obviously becomes: how do we derive these funds? We offer below our proposal to raise from $700 to $800 million from a combination of special industry taxes and general tax revenues. The remaining spending needs will come from cost recoveries and interest on fund investments.

A. Feedstock Taxes

We discussed the current feedstock tax and the severe economic impact of increased feedstock taxes in Part I of this Statement. We recognize, however, that it is important to provide a stable base of funding for the CERCLA program for the next five years. We are thus willing to endorse continuation of the feedstock tax, at current levels, for five more years. This would raise approximately $307 million per year. We have some suggestions for technical corrections to the statutory language which we have attached to this Statement for the Committee's consideration.

B. "Waste-End" Tax

To support EPA's anticipated annual spending levels more than $307 million from the feedstock tax will be needed. To reach another increment equivalent to the feedstock tax, we support a national tax on hazardous waste disposal at the fixed rate of $50 per dry weight ton. Such a tax would, among other things:

- produce revenues of the magnitude the current feedstock tax is designed to produce;
- produce broader distribution of tax liabilities among industrial categories and a more logical relationship to hazardous waste disposal activities; and
- provide incentives where appropriate to:
  1) reduce the amount of waste generated, and
  2) utilize technologies to recycle, reuse, neutralize, treat, incinerate or otherwise destroy hazardous waste.

It is important to stress that we strongly oppose a waste-end tax at any rate higher than our $50 per dry weight ton proposal. Our proposed combination of feedstock and waste-end taxes still keeps the lion's share of funding for the waste site cleanup program within the chemical industry. Because so many other industries have contributed to waste disposal in the past, we believe this proposed combination is as much as our industry can fairly be expected to contribute on an annual basis. Our prescription for a workable waste-end tax is contained in Part IV of this Statement.

C. Balance from General Revenues, Interest, and Cost Recoveries

The two types of industry taxes outlined above at the levels we indicated -- approximately $307 million per year from feedstock and $307 million per year from the dry weight waste disposal tax -- will support EPA's projected spending needs. This is because contributions of the general federal revenue share, interest on unexpended fund balances, and cost recoveries secured by EPA from responsible parties after it has spent fund moneys for cleanups should easily provide the balance. In fact, recent EPA projections indicate that it expects to receive a 30% return factor through such cost recoveries. Even if only $700 million per year is spent from the fund for clean-ups, there would be $210 million in cost recoveries per year at the 30% rate. Thus, our estimates displayed below as to cost recovery and interest are probably over-conservative.

The following table shows how our proposed funding scheme would match EPA spending needs of up to $1 billion per year:

(All figures are stated in millions per year)

$307	feedstock taxes
+ 307	waste disposal tax
+ 176	general federal revenues
$790	total tax funding (following lead of H.R. 5640, 77% industry taxes and 23% general revenue)
+ $210	cost recoveries and interest
$1000	annual EPA spending

It should be noted this number does not reflect the total expenditures that will be devoted to cleanup of NPL sites. EPA estimates that 40% of these sites will be cleaned up "up front" by responsible parties through the Act's liability provision. EPA will not have to spend Superfund dollars for these sites. Thus, approximately $460 million will be spent by industry each year for NPL site cleanup in addition to what industry pays in the Superfund taxes. Adding this number to the EPA annual spending needs figure, we see that at least $1.3 to $1.5 billion per year will be devoted to cleanups under our proposal.

IV. Prescription for a Workable Waste Disposal Tax

As stated in part III(B) above, we support a national waste disposal tax at a rate of $50 per dry weight ton to provide over $300 million per year. Such a tax will broaden the base of the current funding scheme and will provide valuable additional incentives for the safe handling and disposal of wastes in the future.

We believe that H.R. 5640 is seriously flawed because it does not include such a tax. We strongly encourage the Senate to correct this deficiency. We are aware of arguments that a waste disposal tax may not be workable and effective, but these arguments do not apply to a properly designed and drafted system.

We believe there are several basic requirements for a workable and effective waste-end revenue system. First, there must be a clearly defined taxable substance. Second, there must be a definite taxable event. Third, there must be an identifiable class of taxpayers. Fourth, there must be a verifiable record of transactions and events to provide the audit trail for enforcement and collection. We have, in fact, drafted statutory language for a system which meets all of these requirements. A copy of our suggested tax scheme is attached.

We note that it is especially important to tax waste disposal on a dry weight basis. If taxes are assessed on a "wet" weight basis, there will be serious distortions of waste management practices. For example, such a system would greatly favor landfill of hazardous waste over other methods of waste disposal. Thus landfilling, the method of waste disposal which has been directly related to the Superfund site problem, would pay significantly lower taxes than would other more environmentally acceptable disposal methods.

Assessing the tax on dry weight would treat all methods of disposal in a neutral manner and would preserve the strong environmental incentive that is created by a tax on waste disposal. If the tax is assessed as a single rate per dry weight ton of hazardous waste, the tax would be assessed on the actual content of hazardous material disposed or deposited for long-term storage.

Determining dry weight is a common, routine analytical procedure. Dry weight is the weight of a substance after removing the weight of water. One method for doing this is referenced by EPA in 40 CFR Part 136. Moreover, the post-closure liability tax which is now in place under CERCLA is imposed on a dry weight basis. 28 U.S.C. 4681(b). The experience developed by the Internal Revenue Service in collecting the post-closure tax would apply here.

Moreover, use of a wet-weight basis would not equitably spread the base of taxing among other industries in relation to their contribution to hazardous waste disposal. Our calculations show that under a wet-weight tax, CMA members would pay a disproportionate 85% of the total. Under a dry weight based tax, our members would pay about 50%. The latter percentage is approximately the percentage of hazardous waste disposed of by the chemical industry.

The operator of the disposal or storage site should be designated as the taxpayer. The operator is the person who performs the taxable event and is currently obligated to maintain disposal and storage records. These records which apply to owners and operators of both on-site and off-site facilities are described in EPA's RCRA regulations. The most important of these records is the operating log which contains a description and quantity of each hazardous waste received and the method and date of its treatment, storage or disposal at the facility, and the location of each hazardous waste within the facility. By designating the facility operator as taxpayer, the number of taxpayers is limited to fewer than four thousand site operators rather than the tens of thousands of generators.

The disposal site operator has an established billing system through which the tax can be directly billed to the specific generator responsible for creating the hazardous waste. This simplifies the tax mechanism and provides a direct incentive to the generator to reduce or eliminate waste disposal.

Some have expressed concern that state experience indicates a tax on hazardous waste disposal would provide an unreliable source of tax revenue. We do not believe this is the case, and there are several responses to this concern.

First, in several instances the state tax statute was poorly drafted and failed to cover all the practices it should have. A national tax on waste disposal could be drafted in more precise language to assure production of appropriate revenues.

Second, the quality of the projection methods some states have used to predict revenues has varied substantially, and some states seem to have greatly overestimated their receipts without good reason. For example, in California, actual tax collections in the first year after enactment reached 93 percent of estimated collections. In contrast, in New Hampshire actual collections reached only 10 percent of the estimated total.

Third, the effectiveness of any state waste disposal revenue systems would undoubtedly improve when the system is administered and collected by experienced tax officials. The state experience reflects reliance on several different administrative systems to collect these revenues, not all of which are equally effective. With a national tax on waste disposal in place, we can be sure that the IRS will collect taxes vigorously. Moreover, the chemical industry will cooperate positively, as we have with the existing Superfund taxes, to make sure that the system will continue to work.

Fourth, when assessing the viability of waste-end taxes enacted in some states but not others, it should be recognized that the enactment of tax in a single jurisdiction may encourage potential taxpayers to avoid conduct that could be subject to tax in that jurisdiction. For example, those who formerly shipped waste for disposal to a state that has imposed a tax on waste disposal may consider alternative disposal options in other states. Those alternatives simply would not be available if a nationwide tax on hazardous waste disposal is adopted and enforced by the Federal Government.

Fifth, a recent analysis of the New York Superfund tax system by the New York State Superfund Management Board confirms that the shortfall in revenues experienced in New York is attributable to one or more of these reasons. See "Fiscal Aspects of the State Superfund Program" (January 1, 1984).

Finally, state experience has compared favorably to that of the Federal Government using the "feedstock" tax during the same period. According to EPA briefing materials recently made publicly available, the average revenue produced under state waste end systems was 60 percent of previously estimated revenue collections. During the same period, Superfund collections produced approximately 80 percent of the estimated collections. Given that the data were obtained under several statutes that ranged in effectiveness from 10 to 93 percent and during a major recession, the state performance under waste end revenue systems came very close to the performance of the Federal tax which employed all the collection resources of the Internal Revenue Service. Under these circumstances CMA believes that a Federal waste-end tax system can eliminate most of the difficulties of taxes on waste disposal that have been perceived at the state level.

Last week's OTA Statement (cited in part I(B) above), contains a lengthy discussion of the virtues of a federal waste disposal tax and provides additional refutation against those who have argued that such a tax would be unreliable or unworkable. See OTA Statement, pages 9-16. While we do not agree with the higher range of the Statement's revenue projections from such a tax, we believe this OTA Statement provides solid support for the reliability and workability of such a tax.

V. Concerns With Inclusion of Numerous Unnecessary or Inappropriate Amendments

A. With Adequate Funding, the Clean-Up Program Can Move Forward Effectively Under the Current Statutory Scheme

Aside from the need for new funding and adjustments to the funding structure, we believe that the Superfund law as now written provides a good, workable framework for the national waste-site cleanup program. We are aware of widespread frustrations that the program has not appeared to be moving fast enough. Our industry, in fact, stands to benefit quite directly from getting this problem behind us, and we are as anxious as anyone to see that day come.

Despite the initial start-up difficulties with the program -- which had nothing to do with the way the law was written -- we believe that any fair analysis indicates that EPA is now making good progress under the program. In our testimony before the Senate Environment and Public Works Committee on May 16, 1984 (statement of Edwin C. Holmer), we explained how EPA's momentum has been building steadily over the last two years and how recent statistics show the program now escalating at a good rate. (Holmer Statement, pp. 11-13.) And testimony of EPA Assistant Administrator Thomas before the Senate Environment and Public

Works Committee (and the House Ways and Means Committee on July 25, 1984) shows this steady and rapid buildup even more dramatically.

It is especially interesting to note that EPA's Superfund study of December 8, 1983, indicates that EPA carefully considered whether the current law should be amended. The study concluded on page 18 that because of the "sweeping authority granted the Agency" by the current law and other factors, a "simple extension of existing authorities" should be recommended, with perhaps adjustments only to the funding level and structure. The only exception was the study's recommendation to revise one section which deals with post-closure liability for RCRA facilities. This section has nothing to do with the inactive waste site cleanup program, however.

Because the program is now beginning to produce and EPA is "on track" under the currently drafted law, we think it would be inappropriate to encumber the process with many new significant amendments which can only disrupt the process and distract EPA from the track it is on. Many such amendments appear in H.R. 5640; others appear in S. 2892. We will describe below our principal objections to such provisions.

B. Unnecessary and Objectionable Amendments in H.R. 5640

1. Level of Protection Required

While inactive waste sites must be cleaned up in a manner which protects human health and the environment, it is important to assure that limited private and public resources not be wasted on construction projects which go far beyond what is necessary to protect health and the environment. Section 108 of H.R. 5640 would produce these results.

This is because Section 108 would require that substantive standards applicable to currently-operating landfills under the Resource Conservation and Recovery Act (RCRA) be applied whenever any waste is to be left at a Superfund site. (Page 23, line 19, to page 24, line 2).

It makes no sense to apply RCRA landfill standards for currently-operating facilities to closed landfills. RCRA is a preventative program which deals with current practices at facilities which are now operating. The regulatory and permitting program under RCRA properly relies on maximizing containment at such facilities with nationally-applicable standards to prevent possible threats to health and the environment.

Superfund is a remedial response program for facilities which are no longer operating. A component of a national RCRA regulatory or permitting standard designed to help assure containment may have no relevance to defining the type of response action necessary to protect health and the environment at a particular site where containment is no longer an issue. Rather, under Superfund, there must be a case-by-case assessment at each site on the level of response action necessary to protect health and the environment.

In fact, under RCRA substantive standards, attainment of "background levels" may often be required. The concept of "background levels" has no logical connection to a level of control that is actually needed at specific sites to protect health and the environment. To require a remedy to achieve background levels may in many cases result in cleanup far beyond what is necessary to protect health and the environment, with no benefit to anyone other than the construction contractor.

Moreover, RCRA groundwater standards apply at the waste-site boundary. Requiring control to any particular levels at such a boundary might overlook entirely the question of the relevant human or environmental point of contact or use. For instance, a drinking water standard (which could be applied under RCRA) expresses concentration levels that people should not drink, and site remedial measures should assure that people not drink substances in these concentrations. It may be senseless, however, to require that the concentration level specified in such a standard be met at the waste site boundary in situations where (1) the concentration would be substantially diluted or entirely dissipated by the time it reached a point where the water could be drawn for drinking or (2) the groundwater, for reasons apart from the waste site proximity, is not going to be used for drinking in any event.

Section 108's "waiver" provision (page 24, lines 8-11) does not provide a meaningful response to these problems, for it would still require "substantially equivalent" protection to that which would be necessary under its general requirements. If that level happened to be great over-protection, the "waiver" would still require such over-protection.

In contrast, S. 2892 assures that resources need not be wasted on unnecessary construction projects. The Senate Bill properly requires that all remedial actions "at a minimum" assure protection of health and the environment. It does not, however, require application of RCRA standards. Instead, it requires that remedial actions be "relevant and appropriate under the circumstances presented."

2. "Contribution" for Joint and Several Liability

Section 116 of H.R. 5640 provides a "right of contribution" for parties held jointly and severally liable under Sections 106 and 107 of CERCLA. An express statutory right of contribution will be useful in ameliorating the harshness and inequity of joint and several liability, and will end all debate about whether CERCLA affords a right of contribution.

As drafted, however, this section imposes unfortunate and counterproductive limitations on the discretion of the Federal Courts. The problem is that the section provides for contribution as a "separate action," brought "after adjudication of liability and recovery of costs or damages." It also provides that courts may equitably apportion damages only "following" adjudication of liability. Without this language contribution actions could, at the judge's discretion, be tried together with the main lawsuit under Rule 14 of the Federal Rules of Civil Procedure. The Section's language, however, would apparently eliminate this judicial discretion.

The discretion to manage joinder of additional parties and claims is critical to the judiciary's ability to prevent duplication, avoid delay, achieve settlements and control excessive transaction costs. Moreover, if this discretion is denied, voluntary settlements would be much more difficult to achieve. Requiring defendants to pay a judgment out-of-pocket before they can begin to seek contribution from other responsible parties would be quite burdensome and unfair.

Judgments in Superfund cases may be huge (a consent decree for approximately $50,000,000 was entered in the Petro Processors case in Louisiana). To require a defendant to pay the entire judgment without contemporaneous contribution would be an extremely unjust burden. It might even force some smaller companies to seek the protection of the bankruptcy laws. And defendants would be much more likely to decide to fight than to settle, because the only settlement possible would require them to pay up-front a large and inequitable portion of the response costs.

In Superfund cases to date the courts have made constructive use of their Rule 14 discretion. In United States v. Chem-Dyne (Civil No. C-1-82-840, Southern District of Ohio), Judge Rubin granted the original defendants leave to file third-party complaints against more than 150 additional third-party defendants. The third-party defendants have sought just the kind of severance that the contribution amendment language compels. Judge Rubin, however, indicated in pretrial conferences that he will deny the motions to sever the contribution claims. His apparent reason is that he wants all of the potentially responsible parties before the court so that he will have at least a fair chance of settling the case.

In United States v. Conservation Chemical Company, (Civ. No. 820983-CV-W-5, Western District of Missouri) Judge Wright has also exercised his discretion under Rule 14 to permit complaints against more than 160 third-party defendants. Here, again, the Judge can hold the parties in the case for settlement purposes or later exercise his discretion to serve the third-party complaints.

3. Delayed Judicial Review Rights

Sections 115(b) and 117(e) of H.R. 5640 would curtail judicial review rights in a highly unfair and improper manner. Section 115(b) would prevent persons subject to an administrative abatement order from seeking judicial review of that order unless and until EPA sought to enforce that order in court, notwithstanding the fact that violation of such an order is punishable by treble damages and fines of up to $25,000 per day. This limitation on judicial review would apply despite the fact that EPA has generally issued these orders with hardly any due process at all (usually a quick "right to confer").

In the same vein, Section 117(e) would cut off the rights of potentially liable parties from seeking judicial review of an EPA decision to incur fund expenditures at a site unless and until EPA sought to recover its costs for such a site in court. This cut-off would apply despite the fact that the Bill would improperly remove from current law the requirement that the government's expenditures be "not inconsistent" with the national contingency plan in order to be recoverable. Compare CERCLA §107(a)(4)(A) with §116(a) of the Bill.

Both of these provision are highly unfair. As to the abatement orders, where any party faces an order requiring massive efforts and expenditures which might take months to complete, possible treble damages, and criminal liabilities, that party should not be cut off by statute from the option of at least attempting to convince a court to review the propriety of the order. The fact that the propriety can be reviewed once EPA brings an enforcement suit is wholly insufficient to protect against abuse. EPA may bring such a suit months or years after an order is issued, during which time a party may be required either to spend millions or to risk the millions (trebled) and criminal liabilities by betting that a court at the enforcement stage will agree with his arguments. This would put an incredibly heavy and punitive club in EPA's hands and cut off any effective way to guard against its possible abuse.

On EPA fund-financed remedy selections, there must again be the right for interested parties to seek judicial review; courts need not grant it in inappropriate circumstances, but a statutory cut-off is highly unfair. Some parties may honestly believe that a remedy is going to entail unnecessary and counterproductive "gold-plating;" other parties may honestly believe that a remedy is going to be inadequate. Under these provisions of H.R. 5640, neither type of party even has the opportunity to _try_ to get judicial review of this until _after it's done_.

Of course, the judicial review process should not be abused so as to delay the waste-site cleanup program. The courts are fully equipped, however, to assure that such abuses will not occur. Even though the law can preserve the normal right for parties to _seek_ judicial review, this does not mean that courts will _grant_ judicial review in inappropriate circumstances or allow such review to delay cleanup. For instance, in the first judicial opinion to address this issue, a federal district court dismissed a suit to review EPA's fund-financed decision while recognizing that such type of review may be appropriate in some circumstances. J.V. Peters & Co. v. Ruckelshaus, No. 83-4436, N.D. Ohio, February 17, 1984. In a more recent case, a federal district court entertained review of an EPA abatement order but denied the parties' requests for injunctive relief from the order. The court instead ordered cleanup activities to proceed forthwith. Earthline Co. v. Kin-Buc, Inc., No. 83-4226, D.N.J., April 16, 1984.

Moreover, granting judicial review does not mean that the cleanup process need be impeded. Since remedies often require a design phase and several months of preliminary work before the "heavy dollar" phase of the cleanup is actually underway, judicial review could proceed on an expedited basis in appropriate cases without delaying cleanup.

S. 2892 contains no such legislative restrictions on judicial review. The Senate Bill would properly allow courts to decide when judicial review is appropriate.

4. Interference with EPA's Program Agenda: Schedules for Cleanup and Other Actions

We fully support rapid site cleanup with a strong and effective program. As elaborated in part V(A) above, we believe that the current Act, reauthorized at such funding levels as EPA needs to run such a program, gives EPA strong tools to carry out such a program. As to the pace of such a program, we believe that the unabating public pressures for waste site clean up, coupled with firm Congressional oversight, are now working -- and will continue to work -- to assure that EPA addresses sites on as quick a basis as is rational. We fear, however, that imposition of arbitrary statutory deadlines for various types of activities has the great danger of detracting EPA from its timetables, plans and agenda, and can only have counterproductive effects.

Section 112 of H.R. 5640 contains numerous provisions which may impose undue constraints on EPA's ability to plan and act rationally, and to subject EPA to resource-draining defense of citizens' suits. EPA would be put under very tight statutory schedules to commence remedial investigations and feasibility studies (RI/FS) at all 546 sites on the current National Priorities List (NPL); to complete preliminary assessments of over 16,000 sites on the current "ERRIS" list; to perform remedial actions at NPL sites, and to expand the current NPL to include 1600 sites.

Such arbitrarily-induced haste in the decision-making process may easily produce counterproductive effects. Complex scientific, engineering, and legal decisions must often be made at various stages of each site's cleanup process, and there must be appropriate public participation opportunities in the remedial selection process. Inflexible deadlines can easily cause the short-circuiting of various stages along the process, and can encourage sloppy decision-making.

H.R. 5640 would accordingly create wholly inappropriate and disruptive tension in the program. To the extent EPA drives itself to meet artificially-induced deadlines, it risks making careless decisions which may in some cases be overprotective and may just as easily in some cases be underprotective. In such a situation, EPA could have great difficulty securing cost recovery in court, for defendant potentially responsible parties would have a field day showing the inadequacy of EPA's decision-making process. To the extent EPA wants to take a responsible approach of putting careful protection of public health ahead of meeting an inflexible schedule, it risks the disruptive and resource-draining potential of citizens suits and public criticism for having missed a "deadline."

S. 2892 contains no such restrictive deadlines. Under the Senate Bill, EPA would be able to continue its progress unimpeded by artificial deadlines and burdensome lawsuits.

5. Inclusion of New Regulatory Scheme for Currently Operating Facilities

Title III of H.R. 5640 would impose upon the Superfund statute a major new program for regulating underground storage tanks for petroleum and, apparently, other hazardous substances. It requires EPA under stringent deadlines to promulgate a major new set of comprehensive control regulations (§303), and contemplates a state program approval process somewhat akin to the State Implementation Plan process under the Clean Air Act (§304).

We must express our strong objections to inclusion of such a program in the Superfund statute. Superfund has been designed and funded as a response statute to address hazardous substance releases. Its primary focus -- and the logic of its funding scheme -- is on the cleanup of inactive chemical waste sites. It has not been designed as a regulatory program that develops and applies performance standards to current, ongoing business operations. Other environmental statutes, such as the Clean Air Act, the Clean Water Act, and the Resource Conservation and Recovery Act (RCRA), have been established for that purpose. EPA has organized its manpower and resources to carry out these functions accordingly.

We fear that inclusion of such a major new regulatory program for ongoing activities as part of the Superfund law and program will have a great potential to divert attention and focus away from the inactive chemical waste site cleanup program. We believe that the Superfund program must continue to concentrate all its efforts on this important goal, and not be encumbered by a new regulatory program.

Moreover, it would be very unfair if funding for such a new program were to come from the Superfund. Fund resources should be devoted to the cleanup of inactive chemical waste sites to the maximum extent possible.

Finally, it appears from staff summaries accompanying the Bill that this program is intended to regulate petroleum storage tanks. As now drafted, however, the Bill would cover virtually any type of substance stored in a tank, even flow-through process tanks at manufacturing facilities. The scope and types of potential problems vary greatly between underground petroleum storage tanks and other kinds of tanks, and the types of control programs that might be warranted vary greatly too. We object to any "lumping" of these different types of facilities into the same program.

S. 2892 contains no such provisions for storage tanks. EPA's program would be allowed to focus principally on waste site cleanups.

6. Citizens Suits

Section 201 of H.R. 5640 includes a "citizens suits" provision which grants citizens a right of action in federal court against operators of current hazardous waste management facilities under RCRA, notwithstanding the operator's compliance with his permit and with all applicable RCRA regulations. This provision would also give citizens a cause of action in federal court to sue to compel site cleanup. We oppose this section of H.R. 5640.

Perhaps our greatest concern is the section's potential to undercut the careful permit participation and review procedures prescribed by Congress under RCRA. Interested persons are already entitled to participate in the permitting process. Section 7006(b) of RCRA also gives interested persons the right to challenge the permit in a petition for review in the court of appeals for a period of 90 days. Thus, if an interested citizen want to object to the terms of a permit, he can do so by participating in the permit proceeding and by seeking review in court. Once the 90-day review period has run, however, the permit is no longer subject to review. The citizen suit provision would completely destroy this carefully designed system. It would permit suits to be brought at any time challenging a permit upon an allegation of imminent hazard.

We are equally opposed to the provisions which would allow citizens to sue to compel the cleanup of inactive hazardous waste sites. This provision would, in many cases, slow down current waste site cleanup efforts and create the potential for conflicting or inconsistent cleanup lawsuits. Morever, Mr. Ruckelshaus and Mr. Thomas have indicated in recent Congressional testimony that these types of provisions could also assure that EPA's resources are substantially diverted away from enforcing the law and cleaning up sites -- and toward defending itself against unnecessary suits in Court.

Where citizens brought suits concerning sites that were not currently in litigation, this section could subject defendants to subsequent inconsistent lawsuits regarding the same site. Citizens could bring suit for the cleanup of a site. The defendants could then agree to settle and clean up the site. EPA and the Justice Department could subsequently decide that cleanup was inadequate for the site. Because the Government was not a party to that original suit, it could bring a second action, regarding the same site, against the same defendants.

S. 2892 does not contain such a disruptive provision.

7. "Pollutants or Contaminants"

Under current CERCLA, EPA may respond to two types of substances: (1) a "hazardous substance," which is clearly defined and listed; and (2) a "pollutant or contaminant," which may be any of an infinite number of substances. The list of "hazardous substances" is finite (there are currently 696 designated susbtances), and persons have notice as to what is on the list. Persons have no notice whatsoever as to what may constitute a "pollutant or contaminant," however. Congress in the current CERCLA accordingly provided that responses to pollutants or contaminants should be limited to protection of "imminent and substantial dangers" to public health or welfare. This would assure that the bulk of fund resources would not be diverted to controlling substances that had not been deemed sufficiently serious to warrant designation as "hazardous" through rulemaking.

Section 103 of H.R. 5640 adds a reference to "pollutants or contaminants" virtually every time the phrase "hazardous substance" appears in CERCLA. This may be appropriate to perfect various drafting inconsistencies from the original CERCLA, particularly with respect to inconsistent treatment of liabilities. The blurring of the distinction as H.R. 5640 is now drafted, however, raises the potential that fund resources could improperly be substantially diverted to substances that have not been designated as "hazardous." This is because H.R. 5640 as now drafted could be read to extend response authority for "pollutants or contaminants" well beyond what is necessary to abate an imminent and substantial danger and into long-term "remedial" work. This would divert fund resources away from the type of chemical waste sites the law was primarily intended to address.

We believe that EPA should be able to respond to releases of pollutants or contaminants with fund dollars where necessary to abate emergencies which immediately threaten public health. EPA should not, however, use fund dollars to provide long-term remedial actions going beyond what is necessary to abate such immediate threats from pollutants or contaminants. EPA could use its authority under Section 102 of CERCLA to designate any substance as a "hazardous substance" through rulemaking. Through this process, EPA can provide manageability to the process of determining which of an infinite number of substances should trigger the authority for fund dollars to be spent for long-term remedial actions.

S. 2892 contains no similar provisions.

8. Excusing States from Liability For Their Own Sites

Under ~~current~~ CERCLA, a state must provide 50% of the fund-financed cleanup costs at a site if the state owned the site. (CERCLA §104(c)(3)). Section 107 of H.R. 5640 would limit this 50% requirement to sites which are both owned and operated by a state (page 19, line 5). This limitation is inappropriate and should be deleted. Where a state is the owner, its connection with the site is sufficiently great to warrant at least 50% responsibility. Any site owner, whether private or public, has primary responsibility for occurrences on its own property and should not be allowed to shirk that responsibility simply by leasing land to others.

S. 2892 contains no provision similar to Section 107.

9. Right of EPA and States to Recover Money They Waste From Other Parties

Current CERCLA specifies that federal and state response costs "not inconsistent with the National Contingency Plan" may be recovered against responsible parties. Section 116(a)(1) of H.R. 5640 would improperly delete this phrase, and allow the federal and state governments to recover against responsible parties for any costs they incur, no matter how wasteful, arbitrary, or unnecessary. Not only would this be grossly unfair to the responsible parties, it would also take away a valuable incentive for the government to avoid wasting fund resources in response activities. Section 116(a)(1) should accordingly be deleted.

If the section is based on a fear that the government will have difficulty sustaining a "non-inconsistency" showing in court, that fear should be put to rest by the court's opinion in U.S. v. North Eastern Pharmaceutical, 20 ERC 1401 (W.D. Mo., February 3, 1984). The Court there clearly distinguished between the "not inconsistent" language of CERCLA §107(a)(4)(A) (which applies to the government) and the "consistent" language of CERCLA §107(a)(4)(B) (which applies to other parties), and ruled that the burden of proof would rest with parties trying to challenge the government's expenditures. 20 ERC at 1425.

S. 2892 contains no similar provision promoting wasteful expenditures.

10. Superfund Grants to Groups Reviewing EPA' Cleanup Proposals

Section 111 of H.R. 5640 provides, without any limitations whatever on the total dollar amount, for grants of Superfund dollars to "groups of individuals" to obtain consultants' reviews of EPA's cleanup proposals. While it is important that individuals who may be affected by a site have the opportunity to review and comment on EPA's cleanup proposals, it would be duplicative and wasteful for the government to fund consultants to review its own consultants' work. The prime beneficiary of such a provision would be the consulting industry.

The petrochemical industry is taxed heavily under Superfund so there will be moneys available to clean up problem waste sites. Efforts in H.R. 5640 to divert funds away from cleanup --

such as the consultants' grant authority under Section 111 -- should be rejected.

Moreover, the unfairness of this section is manifest. The federal government proposes literally thousands of regulations, permits, licenses, projects, and other actions each year that may have a real impact on citizens. Many of these actions can affect citizens' social, physical, and/or economic well-being just as much as a particular remedial plan at a particular site. Why should the government pay for citizens to hire private consultants to review its consultants' work in this area but not in all the others?

And at some waste sites, small companies or individuals who may later become liable parties for the cleanup costs may have resources which are just as limited as the "groups of individuals" near the site. The impact of the cleanup decision on such small companies could be just as tangible as the impact on the "groups." Why should the government fund technical review work for one type of party but not the other?

S. 2892 contains no such provisions.

11. Promotion of Property Buy-Outs

Even though EPA has authority under current CERCLA to provide for both temporary and permanent relocation in appropriate circumstances (CERCLA §101(23) and (24)), Sections 102 and 112 of H.R. 5640 contain provisions designed to greatly increase the diversion of Superfund cleanup dollars to property buyouts and business debt relief.

These provisions would provide for coverage of business debts accruing during a temporary relocation, remove the requirement in current law that states cover 10% of permanent relocation costs, and establish a "high priority" for the Superfund to buy out non-residential properties around the Love Canal. These provisions should be rejected because of their potential to encourage the wasteful diversion of Superfund dollars to buy real estate.

Particularly objectionable is the deletion of the State 10% sharing requirement for such buy-outs. One of the major controls built into the current CERCLA for responsible, rational action -- the State's demonstration of a commitment even to a small portion of a remedy -- would be thrown out in H.R. 5640. There is a great potential in these provisions to foster incredibly high expenditures of fund dollars for nothing more than unfounded fear in many situations. It should be recalled that the Times Beach buy-out cost almost $40 million, and that was a very small town. The current law provides ample authority for relocation where EPA determines the situation warrants it (again witness Times Beach). Amendments which foster buy-out requests will not be helpful to the conduct of a cost-effective national remedial program.

12. Imposition of New Restrictions on Department of Transportation Discretion

Section 203 of H.R. 5640 makes a significant change to §306 of current CERCLA, which deals with transportation of hazardous substances. It would make the Department of Transportation "regulate," not just "list" (as provided in current law), CERCLA hazardous substances under the Hazardous Materials Transportation Act. This would result in a significant paperwork burden since shippers would nave to provide hazardous materials shipping papers for about 1000 additional CERCLA substances. Moreover, if the shipping paper requirement is not complied with, the liability for any health and environmental damages resulting from a transportation accident would shift from the transporter to the shipper.

Such blanket extension of the shipping paper requirements to CERCLA substances is totally unnecessary and burdensome. Many CERCLA substances, particularly at their current "reportable quantity" weight, simply do not pose transportation hazards. In a current rulemaking, DOT is proposing to determine which CERCLA substances should be subject to the shipping paper requirements on a substance-by-substance (or group of substances) basis. Docket No. HM-145, 48 Fed. Reg. 35965. This case-by-case approach should be supported, and Section 203 totally undermines it.

S. 2892 would preserve this case-by-case approach, as there is no provision analogous to Section 203.

13. Requirement to Close Active Landfills and Other Waste Facilities

Even though Superfund is a law designed to clean up problem inactive waste sites, Section 115(b) of H.R. 5640 contains a provision which mandates that EPA force the closure of certain facilities which are regulated under the Resource Conservation and Recovery Act (RCRA). Although this provision was designed to force closure of one particular landfill (the BKK landfill in West Covina, California), the terms of the Section could operate to force EPA to close not only many other landfills, but also other types of waste storage and treatment facilities.

The primary conditions necessary to trigger the closure requirements are that 75,000 persons reside within a 2.5 mile radius of the facility and that a state or local government has required temporary or permanent relocation of any individuals because of the facility.

This section should be rejected because it legislates in a highly arbitrary way enforcement decisions which should be left for EPA and the courts. If the conditions are triggered, cleanup or other remedial actions are foreclosed; EPA's only option is to close the site. At a time when the nation faces an ever worsening shortage of waste disposal capacity, such a legislative approach could only exacerbate the situation.

Moreover, the section is ripe for abuse by state or local officials who might want a landfill closed to reap local political gains. Since only a "temporary" relocation of a undefined number of individuals is required, quick and minor "relocations" might be engineered for the sole purpose of closing a landfill which is operating legally and safely.

S. 2892 contains no similar provision.

C. Unnecessary and Objectionable Amendments in S. 2892

The Senate Environment and Public Works Committee voted to report a new bill -- S. 2892 -- on September 13. We have already objected to the annual funding levels proposed in that Bill in the earlier parts of this Statement.

As to other issues, with the important exception of the health insurance provision discussed in Part 1 below, the CERCLA amendments contained in S. 2892 are far less objectionable and disruptive to the Superfund program than those contained in H.R. 5640. In fact, none of the objectional provisions contained in H.R. 5640 discussed in parts 1 through 13 of section B is included in S. 2892.

We should note that our discussion below cannot identify particular amendments by section numbers in S. 2892. At this time, we have received no officially reported Committee Bill with section numbers. We have only been able to review numerous typewritten versions of amendments which the Committee adopted, without assigning section numbers to them.

1. Health Insurance Funded by Superfund

In our May 16 testimony before the Senate Environment and Public Works Committee (referenced in part V(A) above), we explained why, in light of the current state of scientific evidence and the need to avoid diverting Superfund from waste site cleanup, it would be wholly inappropriate for Congress to legislate programs for so called "victims' compensation" as part of the Superfund. In passing H.R. 5640, the House wisely rejected any such proposals. The House in fact rejected by a vote of 200-159 an amendment to fund a compensation scheme out of Superfund. See Congressional Record of August 10, 1984, at H8892 to H9006.

Yet S. 2892 contains such a provision, and the Committee should delete it. The Bill establishes a so-called "victim assistance demonstration program." This provision would provide Superfund money to finance a five state insurance program for persons exposed to hazardous and non-hazardous substances. EPA would select the five states and determine the grant money for each state.

Enactment of this compensation program would be a serious mistake. It would divert needed resources from the cleanup of hazardous waste sites. Moreover, it is likely to develop into an uncontrollable entitlements program that would be extremely costly for the petrochemical industry and the entire nation.

The program in essence provides free insurance. Superfund money would be channelled to five states and used to purchase medical and burial insurance policies for individuals who have been exposed to a hazardous substance, pollutant or contaminant.

It is important to note that the medical benefits insurance policy covers all medical and surgical treatment and hospitalization except for accidental injury, routine pregnancy and well baby care. There is no requirement that the condition being treated has any connection whatsoever to an exposure to a hazardous substance, pollutant or contaminant. Thus a person exposed to a substance known to cause only skin cancer would still be eligible for medical care for diabetes or other unrelated health problems.

This amounts to a comprehensive health care program for all chronic and acute illness except accidental injury. It carves out a class of individuals who would henceforth be entitled to free health care. In short, it is the beginning of a national health insurance program to cover all the major illnesses in the nation.

The cost of such an effort is potentially staggering. Once a federal right to compensation is established, it is unlikely that Congress would be able to limit the program to five states or restrict compensation to a few benefits.

The potential for this provision to grow into a program of enormous dimensions has been recognized in the media. In an editorial entitled "Runaway Compensation," the Washington Post, after reviewing a similar proposal, commented: "The bill limits reimbursements to part of the tax-based Superfund, but it is hard to imagine that claims would be denied to equally eligible parties when that small fund was exhausted."

This is amply demonstrated by the history of the Federal Black Lung Act. Under this statute, a compensation program for miners expanded from a predicted overall cost of $200 million to an actual cost of $2 billion a year. At such a cost, there would be literally no money in Superfund for the cleanup of hazardous waste sites.

Superfund should not be diverted from its primary purpose of cleaning up hazardous waste sites. Consumption of Superfund resources for other purposes can only mean that fewer sites will be cleaned up. Our goal should remain preventative, to reduce the exposure of Americans to hazardous waste as quickly as possible.

As the New York Times stated in a recent editorial "Don't Divert the Superfund," compensation is "an issue separable from cleanup." If Congress "sets high priority on expunging toxic dumps, it has to insure that the expanded Superfund is dedicated to that cause alone."

2. Authorization of Superfund Dollars to Pay for Federal Facilities' Remedies

Under Section 111(e)(3) of current CERCLA, Congress wisely restricted use of Superfund dollars to pay for remedial actions respecting federally-owned facilities. It would be unfair to use a fund derived largely from industry taxes to pay for the federal government's own problems. Instead, where a federally-owned facility is creating a problem, cleanup is funded through the responsible agency's own budget.

An amendment added to S. 2892 would make a potentially significant incursion into the principle of federal responsibility and should be rejected by the Committee as an unwarranted drain on Superfund resources. That amendment would make Superfund dollars available to provide alternative drinking and household water wherever there is groundwater contamination outside the boundary of a federally-owned facility and the federal facility "is not the only potentially responsible party."

Because of the "multi-layered" approach to liability under CERCLA where prior owners, generators, and transporters may all be liable as well as a current owner (CERCLA §107), there may be very few sites where the federal government is the only potentially responsible party. So long as a site is owned by the federal government, the government has sufficient responsibility to fund remedial activity out of the responsible agency's budget. Under this amendment, special industry tax dollars would be diverted to pay for the government's own problems. The basic principle of federal facilities' responsibility should not be compromised in this legislation.

3. "High Priority" for Love Canal Buyout

As discussed in part 11 of Section B above, EPA already has authority in current CERCLA to pay for property relocation where that is an appropriate and cost-effective use of Superfund resources. An amendment included in S. 2892 would improperly restrict EPA's discretion in this regard by singling out non-residential property around a single site (the Love Canal) for "high priority" buy-out. As discussed in Section B(11) above, such provisions can only foster the diversion of fund resources for cleanup activities and are inappropriate in this reauthorization legislation.

CMA'S SUGGESTED STATUTORY LANGUAGE FOR A NATIONAL WASTE DISPOSAL TAX

(see pages 18-19 of attached Statement)

IMPOSITION OF TAX ON DISPOSAL OR LONG-TERM STORAGE OF HAZARDOUS WASTE

Sec. 201. Chapter 38 of the Internal Revenue Code of 1954 is amended by inserting after Subchapter C the following new subchapter:

"Subchapter D - Tax on disposal or long-term storage of hazardous waste

"Section 4691. Imposition of Tax

"Section 4692. Definitions

"Section 4693. Records, Statements and Returns

"SECTION 4691. IMPOSITION OF TAX

"(a) GENERAL RULE. There is hereby imposed a tax on (1) the receipt of a hazardous waste for disposal at a qualified hazardous waste disposal facility or (2) long-term storage of a hazardous waste in a qualified hazardous waste storage facility.

"(b) AMOUNT OF TAX. The amount of the tax imposed by subsection (a) shall be $50.00 per dry weight ton.

"(c) EXCLUSION FOR CERTAIN WASTES. The tax imposed by subsection (a) shall not apply to those wastes which are, on January 1, 1984, exempt from regulation as a hazardous waste under Section 3001 of the Solid Waste Disposal Act, as amended. In the event that any of such waste is determined by the Administrator, following studies as required under Section 8002 of such Act, to pose a potential danger to human health and environment, and the Administrator promulgates regulations for the disposal of such waste, then the Administrator shall transmit to both Houses of Congress, along with such regulations, his recommendation of a special tax rate for the disposal or long-term storage of each dry weight ton of such waste. The special tax rate which shall be in lieu of the tax rate in subsection (b) shall take effect only when authorized by Act of Congress.

"(d) LIABILITY FOR THE TAX. The tax imposed by this section shall be imposed on the owner or operator, (as prescribed by regulations promulgated by the Secretary) of the qualified hazardous waste disposal facility or qualified hazardous waste storage facility at which the hazardous waste is disposed of or stored.

"(e) CREDIT FOR PRIOR TAX. (1) A credit shall be allowed in the computation of any tax due under this section on the disposal of a hazardous waste for any tax previously paid under this section by the disposer on the long-term storage of such hazardous waste.

"(2) In the event that a person who has paid a tax under this section on the long-term storage of a hazardous waste causes such hazardous waste to be delivered to and received by another person who is the owner or operator of a qualified hazardous waste disposal facility, then such person who paid the tax on the long-term storage shall be allowed a credit for such tax in the computation of any tax subsequently due on the long-term storage or disposal of a hazardous waste.

"(3) For purposes of determining any credit allowances for fungible waste under the provisions of paragraphs (1) and (2), it shall be presumed that the last of such waste placed in a qualified hazardous waste storage facility shall be the first to be removed from such facility.

"(f) FRACTIONAL PART OF TON. In the case of a fraction of a ton, the tax imposed by this section shall be the same fraction of the amount of such tax imposed on a whole ton.

"(g) PROSPECTIVE APPLICATION OF TAX. The taxes imposed in this section shall not apply to hazardous waste which is received for disposal or placed into long-term storage prior to the effective date of this amendment.

"(h) TERMINATION. The taxes imposed by this section shall not apply after September 30, 1990, except that if on any September 30 prior to that date:

"(1) the unobligated balance in the Hazardous Substance Response Trust Fund as of such date exceeds $1.8 billion and

"(2) the Secretary, after consultation with the Administrator of the Environmental Protection Agency, determines that such unobligated balance will exceed $1 billion on September 30 of the following year if no tax is imposed under Section 4611, 4661, or 4691 during the calendar year following,

then no tax shall be imposed by this section during the first calendar year beginning after such September 30.

"SECTION 4692. DEFINITIONS

"(a) DEFINITIONS. For purposes of this subchapter:

"(1) DISPOSAL. The term 'disposal' means the discharge, deposit, injection, dumping or placing of any hazardous waste into or on any land or water so that such hazardous waste may enter the environment. 'Disposal' shall not include the treatment or recycling of hazardous wastes or the storage of hazardous wastes in a facility described in the definition of 'Qualified Hazardous Waste Storage Facility' below.

"(2) LONG-TERM STORAGE. The term 'long-term storage' means remaining within the confines of a qualified hazardous waste storage facility for one year or more.

"(3) QUALIFIED HAZARDOUS WASTE STORAGE FACILITY. The term 'qualified hazardous waste storage facility' means any storage facility, waste pile or surface impoundment, which has received a permit or is accorded interim status under Section 3005 of the Solid Waste Disposal Act. 'Qualified hazardous waste storage facilities' shall not include wastewater treatment facilities permitted by the federal government or by delegated state agencies under the Clean Water Act, or any other hazardous waste treatment facilities.

"(4) WASTE PILE. The term 'waste pile" is a quantity of hazardous waste heaped together as a means of storage as defined under regulations promulgated by the Administrator of the Environmental Protection Agency pursuant to Section 3005 of the Solid Waste Disposal Act.

"(5) SURFACE IMPOUNDMENT. The term 'surface impoundment' is an impoundment in which quantities of hazardous wastes are collected as a means of storage as defined under regulations promulgated by the Administrator of the Environmental Protection Agency pursuant to Section 3005 of the Solid Waste Disposal Act.

"(6) QUALIFIED HAZARDOUS WASTE DISPOSAL FACILITY. The term 'qualified hazardous waste disposal facility' means any disposal facility which has received a permit or is accorded interim status under Section 3005 of the

Solid Waste Disposal Act or under Section 102 of the Marine Protection, Research and Sanctuaries Act, or Part C of the Safe Drinking Water Act. 'Qualified hazardous waste disposal facility' shall not include wastewater treatment facilities permitted by the federal government or by delegated state agencies under the Clean Water Act, or any other hazardous waste treatment facilities.

"(7) HAZARDOUS WASTE TREATMENT FACILITIES. The term 'hazardous waste treatment facilities' means any facility employing any method, technique, or process designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to convert such waste to a non-hazardous waste.

"(8) TREATMENT. The term 'treatment', when used in connection with hazardous waste, means a method, technique or process designed to change the physical, chemical or biological character or composition of any hazardous waste so as to convert such a waste to a non-hazardous waste.

"(9) HAZARDOUS WASTE. The term 'hazardous waste' means any:

"(A) identified or listed under Section 3001 of the Solid Waste Disposal Act, other than waste the regulation of which has been suspended by Act of Congress,

"(B) subject to the reporting or recordkeeping requirements of Section 3002 and 3004 of such Act.

"Provided, however, for purposes of this subchapter, the term 'hazardous waste' shall not mean any waste removed from any facility listed on the National Priorities List (NPL), or for which notification has been provided to the Administrator of the Environmental Protection Agency pursuant to the provisions of Section 105 or Section 103(c) respectively, Title I, of the Comprehensive Environmental Response, Compensation and Liability Act of 1980.

"(10) DRY WEIGHT. The term 'dry weight' means as is actual waste weight less free water content.

"(11) TON. The term 'ton' means 2000 pounds.

"(12) RECEIPT. The term 'receipt' means the act of the owner or operator of a qualified hazardous waste disposal facility by which such owner or operator, at an off-site facility, signs the manifest or shipping paper accompanying the hazardous waste, or at an on-site facility,enters the description and quantity of the hazardous waste in the qualified hazardous waste disposal facility operating record.

"SECTION 4693. RECORDS, STATEMENTS, AND RETURNS

"Every person who disposes of, or stores hazardous wastes for one year or more subject to taxation under this subchapter shall keep records, render such statements, make such returns, and comply with such rules and regulations as the Secretary may prescribe to ensure proper assessment, payment, and collection of the taxes imposed by Section 4691. The Secretary shall consult with the Administrator of the Environmental Protection Agency to ensure that records, statements, and returns required to be kept, rendered, and made under this section shall be consistent, to the extent possible, with the reports required to be submitted to the Administrator under the Solid Waste Disposal Act. The Secretary may require any person who generates, transports, disposes of, or stores hazardous wastes for one year or more and who is required to maintain records under the Solid Waste Disposal Act, the Marine Protection, Research and Sanctuaries Act or the Safe Drinking Water Act, to submit copies of such reports or make such reports available to the Secretary as required."

Sec. 202. The Table of Subchapters for Chapter 38 of the Internal Revenue Code of 1954 is amended by adding the following at the end thereof:

"Subchapter D - Tax on Disposal or Long-Term Storage of Hazardous Waste."

Sec. 203. The amendments made by this Act, unless otherwise provided, shall take effect October 1, 1985.

STATEMENT OF DR. HARVEY ALTER, MANAGER, RESOURCES POLICY DEPARTMENT, CHAMBER OF COMMERCE OF THE UNITED STATES, WASHINGTON, DC

The **CHAIRMAN**. Dr. Alter, you are next.

Dr. **ALTER**. Thank you, Mr. Chairman.

I am Harvey Alter, and I am manager of the Resources Policy Department of the U.S. Chamber. The chamber consists of about 200,000 members, large and small businesses, and we have supported superfund since its creation. We continue to support the program; it's time for reauthorization. But we now believe that reauthorization is premature.

We can't help but wonder what you have heard many times before—why Congress is not waiting the EPA studies that it mandated in 1980. We are not that far away from the completion of the studies, the submission of the studies. And then sufficient time for thoughtful deliberation.

Also as you have heard many times, the chamber also supports an increase in the size of the fund, based on the programs needs and what EPA says it can realistically manage over the next term. Amounts to date in both the Senate and House bills, we believe, are far in excess of what EPA indicates it can efficiently manage, and that we feel that too much is being approached in a crisis management method, when, of course, what we need is problem solving and program or systems management in order to continue to clean these sites.

The chamber also encourages the Congress not to tax any one segment of the economy in a way that will create a competitive disadvantage, particularly in international commerce. We also feel that the haste and the excess amount of moneys that have been talked about, that have been bantered about—their haste will likely result in unsound policies, future environmental problems, and failures resulting in an unnecessary loss of public confidence.

We stand ready to assist Congress in the development of realistic and workable Superfund reauthorization legislation. And we are certainly committed to the future success of this program.

Thank you very much.

The **CHAIRMAN**. Thank you.

[The prepared written statement of Dr. Alter follows:]

Chamber of Commerce of the United States of America
Washington

STATEMENT
on
SUPERFUND AMENDMENTS OF 1984 (S. 2892)
before the
SENATE FINANCE COMMITTEE
for the
CHAMBER OF COMMERCE OF THE UNITED STATES
by
Dr. Harvey Alter
September 19, 1984

I am Harvey Alter, Manager of the Resources Policy Department of the U.S. Chamber. The Chamber supported the creation of "Superfund" in 1980, and I am pleased to be able to reiterate that support. However, we cannot support the current rushed reauthorization that is not giving due regard to sensible financial and environmental management. The current reauthorization is going too far, too fast.

CHAMBER SUPPORT FOR SUPERFUND

Stewardship of natural resources, including the environment, is a broad societal responsibility. The Chamber holds that achieving and maintaining environmental quality is the collective responsibility of all elements of society, employing their joint talents and resources, and working cooperatively with all sectors and levels of government. On this basis, our support for the Comprehensive Environmental Response, Compensation and Liability Act (Superfund) is firm. However, we cannot support the current rush in Congress to reauthorize the Superfund program now, far in advance of its expiration date of September 30, 1985. Nor can we support the excessive funding levels, $7.5 and $10.2 billion, proposed in the Senate and House bills, respectively.

The serious tasks that lie ahead under the Superfund program will require long-term commitment and the implementation of carefully considered policy options. We caution that, in the environmental area particularly, hastily made legislation often results in unsound public policy.

THE CURRENT SITUATION

The original five-year Act authorized $1.6 billion with 12.5% coming from federal general revenues and the balance from taxes on specified chemical feedstocks. In addition, the Act called upon states to contribute a share of certain clean-up costs.

The bulk of the fund comes from taxes on specified petroleum and chemical feedstocks; the law also authorized cost recovery for site clean-ups from responsible parties. The rate of recovery has been slowed by protracted litigation, and we suggest that the legislative definitions and court interpretations of liability under this Act may be responsible, in part, for the delays.

Superfund was passed hastily in the "lame duck" session of Congress in 1980. Congress recognized the imperfections resulting from that haste by requiring certain studies prior to the expiration date. Now, Congress appears to be heading for reauthorization in renewed haste -- not waiting for the studies it mandated. This fact alone should cause pause and reflection, and postponement of legislative action until next year, after the Environmental Protection Agency's (EPA) Section 301(a) studies have been submitted and carefully considered.

A SENSIBLE AMOUNT FOR THE FUND

The Chamber supports an increase in the size of the fund based upon a realistic assessment of the program's needs. However, the amount of money to be authorized must be sensible. This means an amount sufficient to clean-up the sites, an amount that can be reasonably managed by the EPA, and an amount that can be raised without unfairly penalizing any segment of the economy. The proposals now being considered, including the House-passed reauthorization of more than $10 billion, do not pass these tests of common sense financial management.

Both EPA Administrator Ruckelshaus and Assistant Administrator Thomas have repeatedly testified that, averaged over the five-year authorization period, the Agency can reasonably manage no more than approximately $1 billion per year for the Superfund, based on existing program responsibilities. To require them to spend more will result in a waste of human and financial resources, failure of the program, subsequent oversight hearings, and loss of public confidence. Authorization of excess amounts, i.e., just throwing money at the problem, will risk failure. Those who earnestly seek to solve the problem of old abandoned hazardous waste sites should encourage EPA in their sensible management of the program, and not force failure upon them. The strength of the nation's environmental commitment is not determined solely by the amounts of money we make available, but equally in planning for the wise use of those resources.

The Chamber urges that the fund be kept to no more than the amount EPA says it can responsibly and effectively manage to carry out its program responsibilities. Further, the law should be changed to encourage, not thwart, settlement among responsible parties. Finally, the fund must not tax any particular segment of the economy in a way that will create a competitive disadvantage, especially in international commerce.

In a September 13, 1984 editorial, the Washington Post also objected to the rushed reauthorization of Superfund and the expanded amount of money. Regarding the competitive effects of an expanded fund, it added:

> But the much higher tax needed for an expanded fund would certainly put the domestic chemical industry, still a major exporter, at a severe disadvantage relative to its ever more aggressive international competition.

CONCLUSION

Again quoting the Washington Post editorial, "But too many major issues remain unresolved to justify such hasty treatment." The Chamber agrees that the reauthorization process has been too hasty, has ignored the Congressionally mandated studies yet to come, and has not given sufficient thought to providing a sensible amount of money based on the job that lies ahead.

We ask the Senate to give this important issue the consideration and study it deserves, and to establish a fund that can be sensibly managed to do the job, without building in future failures that will divert public attention from environmental quality and undermine confidence in our system to protect public health and the physical and biological environments.

STATEMENT OF URVAN R. STERNFELS, PRESIDENT, NATIONAL PETROLEUM REFINERS ASSOCIATION, WASHINGTON, DC

Mr. STERNFELS. Thank you, Mr. Chairman, members of the panel. I am appreciative of the opportunity of appearing before you on behalf of the National Petroleum Refiners Association, which represents virtually all of the petroleum refining and petrochemical manufacturing business in the United States.

Both of the pending legislative proposals would be very damaging, potentially, at least, to our members. We support reauthorization of Superfund. However, we believe that the reauthorization should not be done except on the basis of experienced judgment and need, and that it should not become one of the final nails in the coffins of a segment of our membership; namely, the independent refiners.

We also agree that deferral of the Superfund reauthorization is necessary and should be put off until next year. It does not seem reasonable that action should be taken without the key decision-making tool that Congress put in the existing law—that is, the evaluation based on the experience under that law due from EPA in December this year.

Much of the rationale for taxing the industry under Superfund is based on the assumption that those taxes will, in fact, be passed through to those customers and users who ultimately are responsible for much of the hazardous-wastesite problems that exist today.

We believe that this is a false assumption under the current business situation, particularly for the independent refiners who are marginably profitable at best. Many have gone out of business. Many others are teetering on the brink of going out of business now. This could very well be the straw that breaks their backs.

The independent refiners can ill afford new taxes in their present situation where little or no opportunity for passthrough to the end user is possible. It is not just an issue of fairness for them, but a matter of survival. Now I stress that for them, and for the petrochemical industry, the impact, as has been referenced before, would be on their ability to compete in the foreign marketplace and with respect to foreign competitors in the United States. The prospects for both of these industries in the future, or long term, is bleak at best, given the international competitive situation that now exists.

Any reauthorization of Superfund, we believe, should be linked to a demonstrated need and reflect a studied approach to fairly placing burdens of the expanded Superfund that is contemplated on those most closely associated with the waste-disposal-site problems which require cleanup.

I would like to add one final point in my summary of my statement, which has been submitted for the record. And that is that we agree with previous speakers who have referenced the victims'compensation program—that is labeled a demonstration program. I believe that that is flying a false set of colors. It is not, in fact, a demonstration program, but an attempt to get a foot in the door on a matter which I believe should be addressed as a whole program by the Congress, and the determination made on the basis of its being a program that addresses the whole Nation rather than some small segment of the States. That seems, to me, to a much more forthright way to deal with what is acknowledged to be a very serious problem. There is no agreement on what the solution should be, however, within my industry or perhaps within the Congress. And we would leave the merits of that to Congress to debate and decide what is the most effective and efficient way to solve that societal problem. But it should not be done in a manner which slips under the door as a small program, which cannot help but escalate dramatically both in size of the funds needed and in terms of its application.

There is no way in the world, in our belief, that five States can be given a benefit of health insurance while the remaining 45 States or citizens in those States are treated unfairly and don't get the same benefit.

Thank you very much.

[The prepared written statement of Mr. Sternfels follows:]

BEFORE THE

COMMITTEE ON FINANCE
UNITED STATES SENATE

TESTIMONY OF

URVAN R. STERNFELS, PRESIDENT
NATIONAL PETROLEUM REFINERS ASSOCIATION

REGARDING PROPOSED SUPERFUND REAUTHORIZATION

September 19, 1984

STATEMENT OF NATIONAL PETROLEUM REFINERS ASSOCIATION
on
Superfund Reauthorization
Submitted to the Senate Committee on Finance
September 19, 1984

The National Petroleum Refiners Association appreciates the opportunity to appear before your Committee to address Senate Bill 2892, Superfund Amendments of 1984, and H. R. 5640, the Superfund Expansion and Protection Act of 1984 recently passed by the House of Representatives.

The NPRA is a national trade association whose membership includes nearly every petroleum refiner and petrochemical manufacturer in the United States. We support reauthorization of Superfund. However, we believe that reauthorization should be done on the basis of experience, judgement and need and that it should not become one of the final nails in the coffin of many independent refiners. Both of these pending legislative proposals would damage all of our members, but most particularly, pose threats to independent refiners.

Superfund reauthorization is premature

It is our firm belief that Superfund reauthorization should be deferred until 1985, the year in which the current law expires. Deferral of this important issue from the closing weeks of congressional action this election year would remove the very likely possibility of a hurried compromise lacking orderly, rational and equitable solutions to a societal problem of great concern. There is no need to rush forward with an obviously controversial bill when a key decision-making tool mandated by the Congress in the original legislation is still lacking. I refer here to the provisions of Section 301 of the Comprehensive Environmental Response Compensation and Liability Act which require an evaluation of the present legislation by the Environmental Protection Agency. These are expected to be available later this year. Experience gained from administration of CERCLA should be a vital ingredient in the reauthorization process. In addition, EPA has indicated in its testimony that the greatly increased revenues contemplated under the reauthorization proposals could not be utilized effectively. In fact, it has been suggested by that agency that some of these proposals would hinder rather than help efforts to rapidly proceed with the job at hand. In addition, the Office of Technology and Assessment, in response to a request from the Senate Committee on Environment and Public Works, has questioned whether EPA and the states now have the technical, administrative and enforcement capabilities to expand and accelerate the program in ways which would ensure effective clean up.

Taxes for cleanup of hazardous waste sites should properly be assessed on those responsibile for waste disposal problems. In EPA's 1983 survey of hazardous waste generators, the petroleum refining and marketing segment was measured as having generated only 3% of current annual waste. In fairness, any future burden on the refining segment should not be greater than its measured contribution to the situation. Much of the rationale for taxing petroleum refiners and petrochemical companies rests on the assumption that increased taxes will be passed along downstream. For most refiners the extreme competitive pressures in today's market have precluded recovery of current tax burdens (such as the recently increased gasoline tax). More important, longer range prospects for the refiners are bleak in view of increased gasoline exports by foreign refiners. Some of these are controlled by foreign governments, and do not share the same tax and manufacturing costs; and in some cases, raw material cost burdens as domestic refiners. The independent refiners can ill afford new taxes in their present situation where little or no opportunity for passthrough to the end user is possible. In view of this situation, basic fairness demands that the burden should be more equitably distributed upon those who have the responsibility for the waste problems that need to be cleaned up. For the independent refiners it is not just an issue of fairness, but a matter of survival of an important segment of the refining business. For the petrochemical industry new taxes would constitute a further bar against successful competition in international markets, thereby adding a further burden on our balance of payments deficit. There is great regional inequity, moreover, between the source of Superfund revenues and the location of the major Superfund sites. Petroleum refiners and petrochemical manufacturers in the states of Texas and Louisiana, for example, now pay approximately 40% of the crude oil taxes and 80% of the petrochemical feedstock taxes, while these states have only 15 sites--or 3%--on the National Priority List. In contrast, the state of New Jersey contains 85 sites--or 16%--on the NPL, yet industry in that state contributes only 2% of the petrochemical feedstock tax and 3% of the crude oil tax. The current Superfund proposals would perpetuate this regional inequity.

This is a period of extremely weak financial condition for both the petrochemical and petroleum refining industry. Long-term prospects for each of these segments of the business, by all reasonable projections, do not hold great promise. Greatly increased Superfund taxes should not be collected and held in escrow while industry's recovery of these additional taxes in the marketplace is highly unlikely. Only those funds EPA can reasonably be expected to spend should be collected. Put another way, only those funds that can be spent reasonably by EPA should be collected.

Provisions for clean-up of leaking underground storage tanks (LUST) should not be added to Superfund.

The Leaking Underground Storage Tanks (LUST) provisions in the House bill are not related to cleanup of abandoned hazardous waste disposal sites. LUST is directed at storage tanks for petroleum products that are used as fuel and for other purposes, and therefore are generally not "wastes." LUST provisions are not appropriately part of Superfund and should be dealt with separately. Since most of these storage tanks are not in the hands of refiners, imposition of taxes on gasoline manufacture to fund cleanup raises serious questions of equity which need to be further explored.

The Superfund tax should not confer any advantage to imported petroleum products.

Under Superfund foreign refiners who import finished gasoline and gasoline blendstocks will only be taxed on those products which they import into the United States. The remaining portions of the barrel which they refine in their plants will not be subject to any additional costs from Superfund or many other U.S. imposed manufacturing costs that fall on the U.S. industry. Domestic refiners must pay the tax on every barrel of crude oil which they run in their refinery and recovery of this tax on traditionally lower profit products such as residual oil are unlikely. Equity would demand that the same tax burden be applied to imported products. Failure to impose at least a comparable tax burden on imported products would, in effect, serve to export U.S. refining capacity and ultimately threaten national security.

Summary

Any reauthorization of Superfund should be linked to a demonstrated need and reflect a studied approach to fairly placing burdens of any expanded Superfund on those most closely associated with the hazardous waste disposal site problems which now require cleanup. We would request that the Committee consider the fact that the refining industry is not, itself, a major contributor to the waste disposal problem. Little or no environmental waste disposal problems occur as a result of fuels produced by refiners; they are transformed in the combustion process into harmless carbon dioxide and water. If enacted, H. R. 5640 would increase refiners' burdens under Superfund almost 16 fold, a monumental and unjustified departure from even the existing law. The Senate Environmental and Public Works Committee's bill S.2892, although it calls for less funding initially, also would impose disproportionate tax burdens on refiners and petrochemical manufacturers. Additionally, S.2892 includes an almost certain guarantee that more funds eventually will be needed for the "demonstration" victims compensation program. We are convinced that once it is established, claims for equal treatment by other states will prove irresistible. Certainly the Congress should not act in haste on this matter where both industry and society have such a great stake in the outcome.

August 21, 1984

ESTIMATED TAX IMPACT ON REFINERS OF H.R. 5640

The National Petroleum Refiners Association has estimated, on a state-by-state basis, the tax burden that could be imposed by H.R. 5640, "The Superfund Expansion and Protection Act of 1984." The current Superfund law taxes petroleum entering U.S. refineries at the rate of .79 cent per barrel; H.R. 5640 would increase the petroleum tax to 9.16 cents per barrel (7.86 cents for the Superfund itself, plus 1.3 cents for an oil spill fund).

Thus, H.R. 5640 could cost U.S. refiners more than $400 million a year--more than ten times as much as they now have to pay.

The estimated taxes tabulated on Figure 1 are calculated as follows: (1) The state-by-state "Crude Capacity" figures are taken from the Department of Energy's Petroleum Supply Annual; they represent operable refinery capacity as of January 1, 1984. (2) Revenues under the current Superfund law are estimated by multiplying operable capacity by the national average refinery utilization rate (which is currently about 76%) and then multiplying this figure by the .79 cent per barrel Superfund tax on petroleum. (3) Estimated revenues under H.R. 5640 are based on a tax of 9.16 cents per barrel. Title V would increase the petroleum tax from .79 cent per barrel to 7.86 cents per barrel, and Title VI would establish a Comprehensive Oil Pollution Liability Trust Fund to be financed by a fee of 1.3 cents per barrel on all oil produced in or imported into the United States.

Figure 1

ESTIMATED TAX IMPACT ON REFINERS OF H.R. 5640

State	Crude Capacity (Barrels/Day)	Superfund Revenues/yr (Present Law)	H.R. 5640 Revenues/yr (Projected)	Increase Over Present Law
AL	155,100	$ 340,000	$ 3,941,000	$ 3,601,000
AK	135,500	297,000	3,443,000	3,146,000
AR	65,480	143,000	1,664,000	1,521,000
CA	2,523,590	5,530,000	64,124,000	58,594,000
CO	71,600	157,000	1,819,000	1,662,000
DE	140,000	307,000	3,557,000	3,250,000
GA	28,500	62,000	724,000	662,000
HI	48,000	105,000	1,220,000	1,115,000
IL	965,500	2,116,000	24,533,000	22,417,000
IN	468,300	1,026,000	11,899,000	10,873,000
KS	322,027	706,000	8,183,000	7,477,000
KY	247,700	543,000	6,294,000	5,751,000
LA	2,245,556	4,921,000	57,059,000	52,138,000
MD	14,200	31,000	361,000	330,000
MI	117,100	257,000	2,975,000	2,718,000
MN	204,143	447,000	5,187,000	4,740,000
MS	370,300	811,000	9,409,000	8,598,000
MT	148,550	326,000	3,775,000	3,449,000
NV	4,500	10,000	114,000	104,000
NJ	502,400	1,101,000	12,766,000	11,665,000
NM	109,130	239,000	2,773,000	2,534,000
NY	105,850	232,000	2,690,000	2,458,000
NC	3,000	7,000	76,000	69,000
ND	60,580	133,000	1,539,000	1,406,000
OH	536,100	1,175,000	13,622,000	12,447,000
OK	464,950	1,019,000	11,814,000	10,795,000
OR	15,000	33,000	381,000	348,000
PA	718,341	1,574,000	18,253,000	16,679,000
TN	60,000	131,000	1,525,000	1,394,000
TX	4,445,624	9,742,000	112,963,000	103,221,000
UT	169,400	371,000	4,304,000	3,933,000
VA	52,000	114,000	1,321,000	1,207,000
WA	398,900	874,000	10,136,000	9,262,000
WV	14,165	31,000	360,000	329,000
WI	39,000	85,000	991,000	906,000
WY	167,055	366,000	4,245,000	3,879,000
Total	16,137,141	*$35,364,000	$410,042,000	$374,678,000

*Actual petroleum tax collections in 1983 were approximately $37,000,000.

State	Percent of Superfund Revenues from Crude Oil	Number of Superfund Sites	Percent of Total Sites
AL	1.0	7	1.3
AK	.8	0	0.0
AZ	0	5	.9
AR	.4	6	1.1
CA	15.6	19	3.5
CO	.4	9	1.7
CT	0	6	1.1
DE	.9	8	1.5
FL	0	29	5.4
HI	0	0	0.0
GA	.2	3	.6
ID	0	4	.7
IA	0	3	.6
IL	6.0	11	2.0
IN	3.0	17	3.2
KS	2.0	4	.7
KY	1.5	7	1.3
LA	13.9	5	.9
ME	0	5	.9
MD	.1	3	.6
MA	0	16	3.0
MI	.7	47	8.7
MN	1.3	23	4.3
MO	0	6	1.1
MS	2.3	1	.2
MT	.9	5	.9
NE	0	0	0.0
NV	< .1	0	0.0
NH	0	10	1.9
NJ	3.1	85	15.8
NM	.7	4	.7
NY	.7	29	5.4
NC	< .1	3	.6
ND	.4	1	.2
OH	3.3	22	4.1
OK	2.9	3	.6
OR	< .1	3	.6
PA	4.5	39	7.2
RI	0	6	1.1
SC	0	10	1.9
SD	0	1	.2
TN	.4	6	1.1
TX	27.5	10	1.9
UT	1.0	1	.2
VT	0	2	.4
VA	.3	4	.7
WA	2.5	13	2.4
WV	< .1	4	.7
WI	.2	20	3.7
WY	1.0	1	.2

The CHAIRMAN. Mr. Merrigan.

STATEMENT OF MR. EDWARD L. MERRIGAN, COUNSEL, NATIONAL ASSOCIATION OF RECYCLING INDUSTRIES, INC., WASHINGTON, DC

Mr. MERRIGAN. Mr. Chairman, the National Association of Recycling Industries, which is the trade association for the metals, paper, textile, and rubber recycling industry, urges the committee that if basic metals such as aluminum, copper, lead, or zinc are to be subjected for the first time to the expanded Superfund sales tax on chemicals, as H.R. 5640 proposes, then it is crucial to metal recycling and plainly in the national interest for Congress to exclude recycled metals, which are taken out of the hazardous-solid-waste stream, from the scope of such an illogical, counterproductive tax.

In 1980, when the Superfund legislation first proposed a tax on metals—that is, the feed-stock tax on metals—there was a provision for the exemption of recycled metals. That exemption was dropped only when the Congress decided to drop the basic metals from the tax in 1980. This year, the House Committee on Energy and Commerce, which had jurisdiction over all the environmental aspects of H.R. 5640, unanimously recommended that recycled metals be exempted from the tax.

This is an ill-conceived logic to try to tax recycled metals, because recycling actually removes these metals, whether they be hazardous or not, from the solid-waste stream. Today, the only known technology for hazardous-waste cleanup is to take the hazardous-waste materials from one dump and move them to another dump, which is considered more secure. Our industry takes these metals out of the waste stream and reuses them again. So it would be exceedingly counterproductive to tax those metals.

Moreover, Mr. Chairman, if there were a Superfund chemical tax on both virgin and recycled metals, it would amount to double taxation and then over and over taxation of these metals—aluminum, copper, lead, or zinc. They are taxed over and over again as they are recycled.

Exemption of recycled metals from the Superfund chemicals sales tax would not significantly reduce Superfund revenues. The exemption we call for would be in the neighborhood of $30 million a year if all of the basic metals were exempt from the bill.

Finally, Mr. Chairman, we propose that the type of exemption which would be adopted by this committee would make it clear that that exemption could not be claimed by any company that is charged with and convicted of or found guilty of any violation of SWDA, the Solid Waste Disposal Act. That is, if any company hasn't paid its cleanup cost, it can't get this exemption.

We urge the committee to take this step because we think recycling is the most environmentally efficient way. In fact, presently the only environmentally efficient way to handle hazardous waste disposal.

Thank you, Mr. Chairman.

[The prepared written statement of Mr. Merrigan follows:]

NATIONAL ASSOCIATION OF RECYCLING INDUSTRIES, INC.
330 MADISON AVENUE / NEW YORK, N.Y. 10017 / (AREA CODE 212) 867-7330

BEFORE THE
COMMITTEE ON FINANCE
UNITED STATES SENATE
WASHINGTON, D.C.

Hearings To Consider H.R. 5640
And S. 2892
Superfund Amendments Of 1984
Wednesday, September 19, 1984, 10:00 A.M.

STATEMENT OF NATIONAL ASSOCIATION OF RECYCLING INDUSTRIES, INC.*

Mr. Chairman:

My name is Edward L. Merrigan. I appear before this Committee today in my capacity as counsel to the National Association of Recycling Industries, Inc. (NARI), the trade association for the nation's metals, paper, textile and rubber recycling industries.

The Association's membership consists of approximately 1,200 companies located throughout the United States which are engaged principally in the industrial recycling of metals and paper recovered from solid waste for reuse as valuable raw materials and resources.

The purpose of our appearance with reference to S. 2892 and H.R. 5640 is to demonstrate that if basic metals such as aluminum, copper, lead or zinc are to be subjected for the first time to the expanded Superfund sales tax on chemicals as H.R. 5640 proposes, then it is crucial to metal recycling —and plainly in the national interest— for Congress to exclude recycled metals from the scope of such an illogical, counterproductive, self-defeating tax.

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*/ Summary sheet at end of statement.

In 1980, when the original Superfund legislation similarly proposed to apply the chemical sales tax to some of these basic metals, a provision was included which authorized and directed the Secretary of the Treasury to exempt recycled metals. That exemption provision was dropped only when the basic metals were also finally excluded from the chemical sales tax provisions of the 1980 legislation finally adopted by Congress.

This year, although the House Committee on Energy and Commerce, which had original jurisdiction over the non-tax provisions of H.R. 5640, was not able to adopt amendments for inclusion in the tax section of the bill itself, the Committee nevertheless did unanimously approve a "recommended amendment" which would exempt recycled metals from full application of the Superfund chemical sales tax on aluminum, copper, lead and zinc.

However, when the House Ways and Means Committee hastily met to mark-up the tax section of that bill prior to adjournment for the Republican Convention last August, the Committee leaders presented the Committee with a predetermined fait accompli package agreement and joined hands to oppose any and all proposed amendments. That package agreement increased the chemical tax originally proposed by the bill for lead and zinc, and added copper to the list of metals subject to the Superfund tax —and contrary to the recommendation unanimously approved by the House Commerce Committee as stated above, that package proposal did not contain even a partial tax exemption for recycled metals.

Congressman Gradison of Ohio and Congresswoman Kennelly of Connecticut thus proposed an amendment to the package agreement which would have provided at least a partial exemption for recycled metals. In line with their pre-determined position, the Committee leaders opposed the amendment, and thus this essential proposal was defeated by the narrow vote of 18 to 17 by the Ways and Means Committee.

The House Rules Committee thereupon adopted a rule which precluded Congressmen from offering amendments —including the recycling amendment— to the tax section of the bill on the House floor.

Consequently, if the Senate Finance Committee also now decides to subject some of our nation's most basic metals —aluminum, copper, lead or zinc— to the expanded, increased Superfund chemical sales tax prescribed by the pending legislation, it is truly imperative for the Committee to include an amendment which would exempt recycled metals from such ill-conceived, counterproductive taxation. The Committee's support for such an amendment is essential for the following reasons:

1. Congress has repeatedly recognized that industrial recycling of valuable raw materials from the solid waste stream is the most efficient, environmentally acceptable method of reducing both solid waste disposal and hazardous waste cleanup problems and costs. Congress has also found that recycling of scarce metals from solid waste operates to conserve this nation's virgin resources and energy

supplies; and that it reduces the United States' dangerous reliance on foreign metal resources, and thereby alleviates the growing deficit in our balance of payments with other nations.[1/]

Accordingly, the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, specifically directs various officials and agencies of the Federal Government to identify and remove, wherever possible, federally-created economic barriers to maximum resource recovery and recycling, and to provide effective economic incentives for the marketing and sales of those materials.[2/]

2. As indicated by its name, the Superfund chemical tax was originally devised to tax toxic chemicals which have been found to pollute the environment as hazardous waste. Basic metals, such as aluminum, copper and zinc, are not chemicals and normally they are not hazardous waste. However, assuming for the sake of discussion that such basic metals are found in hazardous waste, clearly metal recyclers eliminate both (a) environmental pollution and (b) hazardous waste cleanup costs by recycling those metals out of the solid waste stream.

Consequently, metal recyclers eliminate and reduce hazardous waste cleanup costs —which the Superfund chemical tax is designed to defray— and therefore it would be plainly self-defeating and counterproductive for Congress to tax this beneficial recycling.

3. Moreover, imposition of the Superfund chemical tax on both virgin and recycled basic metals would amount to double

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[1/] See §1002(c), Solid Waste Disposal Act, as amended by Resource, Conservation and Recovery Act of 1976 (42 U.S.C. 6901(c)).

[2/] *Id.*, at §§5001-5006 (42 U.S.C. 6952-56); §6002 (42 U.S.C. 6962).

taxation in that aluminum, for example, taxed in virgin form, would be retaxed over and over again when it is recycled out of solid waste.

4. Congress has provided other exemptions from the Superfund chemical tax in past legislation, and the pending legislation now proposes to extend some of those other exemptions. For example, there is a fertilizer exemption and there is an exemption for "substances derived from coal". Clearly, for the reasons suggested above, there are at least equally valid, compelling reasons to exempt recycled metals.

5. The Internal Revenue Code provides virgin metal producers significant tax benefits in the form of (a) depletion allowances and (b) capital gains treatment of profits on virgin ores. Simultaneously, the mining industry has been and still is substantially exempt from hazardous waste regulation under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act.

Consequently, exemption of recycled metals from the Superfund chemical sales tax would operate, to a degree at least, to equalize this longstanding competitive imbalance. In this regard, it should be noted that the only tax incentive ever provided by Congress to the national recycling industry —the recycling energy tax credit— expired at the end of 1982, and because of the mushrooming federal deficit, has not been renewed.

6. Moroever, exemption of recycled metals from the Superfund chemical sales tax would not significantly reduce Superfund revenues. As indicated previously, metal recyclers actually eliminate or reduce cleanup costs generally by recycling metal waste out of the solid

waste stream. But, assuming the chemical sales tax proposed by H.R. 5640 were levied on all tonnages of copper, lead, zinc and nickel currently recycled in the United States, Superfund revenues would be increased by less than $30 million per year. Thus, while it is truly essential to both metal recycling and the several national interests served by metal recycling not to impose further federal tax burdens and inequities on such recycling, a metal recycling exemption would not have a serious, adverse impact on Superfund revenues.

7. Finally, it is important to note that the recycled metals exemption recommended by the House Energy and Commerce Committee and proposed by Congressman Gradison and Congresswoman Kennelly in the House Ways and Means Committee contained a provision which specifically restricted eligibility for said exemption to metal recyclers who remain free and clear of unsatisfied hazardous waste violations of either CERCLA or the Solid Waste Disposal Act. This restriction would serve as an important incentive to the entire national recycling industry to maximize compliance with these important environmental statutes and thereby contribute more and more in excess of the cost of the exemption to the enhancement of this nation's environmental program.

In conclusion, therefore, the National Association of Recycling Industries, Inc. and its members throughout the United States urge this Committee to adopt an amendment to the pending Superfund legislation which would exempt recycled metals from the Superfund chemical tax.

NATIONAL ASSOCIATION OF RECYCLING INDUSTRIES, INC.
330 MADISON AVENUE / NEW YORK, N.Y. 10017 / (AREA CODE 212) 867-7330

SUMMARY OF PRINCIPAL POINTS

1. If basic metals such as aluminum, copper, lead or zinc are to be subjected for the first time to the expanded Superfund sales tax on chemicals as H.R. 5640 proposes, then it is crucial to metal recycling —and plainly in the national interest— for Congress to exclude recycled metals from the scope of such an illogical, counterproductive, self-defeating tax.

2. In 1980, when the original Superfund legislation similarly proposed to apply the Superfund tax to basic metals, a provision was included which directed the Secretary of the Treasury to exempt recycled metals. That exemption was dropped only when the basic metals were also dropped by Congress from the Superfund chemical tax list.

3. This year the House Committee on Energy and Commerce, which has primary jurisdiction over all non-tax aspects of the Superfund bill, unanimously recommended that if basic metals are to be subjected to the Superfund tax, recycled metals should be exempted.

4. A similar exemption amendment was narrowly defeated (18 to 17) in the House Ways and Means Committee when the Committee leadership opposed proposed amendments to their pre-determined tax package, and the bill was passed on the House floor under a Rule which prevented amendments to the tax section.

5. Consequently, if the Senate Finance Committee decides to subject basic metals such as aluminum, copper, lead or zinc to the expanded, increased Superfund chemical sales tax, then it is truly imperative for the Committee to exempt recycled metals from such ill-conceived, counterproductive taxation for the following reasons:

   (i) Recycling of valuable metals from the solid waste stream is the most efficient, environmentally acceptable method of reducing both solid waste disposal and hazardous waste cleanup problems and costs.

   (ii) Basic metals, such as aluminum, copper and zinc are not chemicals and normally they are not hazardous waste. However, assuming for the sake of discussion that such basic metals are found in hazardous waste, clearly metal recyclers eliminate both (a) environmental pollution and (b) hazardous waste cleanup costs by recycling those metals out of the solid waste stream.

It would thus be plainly self-defeating and counterproductive for Congress to tax this beneficial recycling.

(iii) Moreover, imposition of the Superfund chemical tax on both virgin and recycled basic metals would amount to double taxation in that metals taxed in virgin form would be retaxed over and over again when they are recycled out of solid waste.

(iv) The Internal Revenue Code provides virgin metal producers (a) depletion allowances and (b) capital gains treatment of profits on virgin ores. Simultaneously, the mining industry has been, and still is substantially exempt from hazardous waste regulation under the Solid Waste Disposal Act. Accordingly, exemption of recycled metals from the Superfund tax would serve to equalize this longstanding competitive tax imbalance. The only federal tax incentive ever provided for recyclers —the recycling energy tax credit— died in 1982.

(v) Exemption of recycled metals from the Superfund chemical sales tax would not significantly reduce Superfund revenues.

(vi) The type of exemption provision supported by the recycling industry —and as approved by the House Energy and Commerce Committee— would restrict eligibility for said exemption to metal recyclers who remain free and clear of unsatisfied hazardous waste violations of CERCLA and the Solid Waste Disposal Act.

CONCLUSION

The Senate Finance Committee should adopt an amendment to the pending Superfund legislation which would exempt recycled metals from the Superfund chemical sales tax.

The CHAIRMAN. Dr. Pirages.

STATEMENT OF DR. SUELLEN PIRAGES, DIRECTOR, INSTITUTE OF CHEMICAL WASTE MANAGEMENT, WASHINGTON, DC

Dr. PIRAGES. Thank you. The Institute of Chemical Waste Management represents the commercial hazardous-waste service industry. We support the reauthorization of the CERCLA legislation, but would ask this committee to carefully evaluate any proposals for expanding the funding revenue sources.

We are particularly concerned about proposals to implement a waste-end tax. I would like to point out that currently only 20 percent of the total waste generated in the United States is actually placed in a land disposal facility, and only 8.5 percent goes to a service impoundment and landfill, the major targets for the waste-end tax.

In addition, the Solid Waste Disposal Act, recently passed by the Senate, will add further decreases in the amount of waste going to land-disposal facilities. The threat of the new restrictions and the already existing State restrictions will accelerate, we feel, management behavior changes in waste management.

Therefore, we are concerned that a specified amount of tax be raised through a waste-end tax will fail before it even starts. The funding source is now decreasing, and we feel will continue a rapid decrease.

In addition, we feel very strongly that regulations and strong enforcement of the regulations are a more appropriate way to change management behavior rather than relying on imposition of a tax.

As the revenue resource decreases, we will soon reach a situation where the taxing of the waste-end tax will be only on those wastes that cannot go to anything other than our land. Those are generally metals and treatment residues. We feel this would not be a fair situation.

We urge the committee to evaluate any proposals for increased funding mechanisms very carefully, and in particular to look at some of the problems mentioned in my written testimony regarding the waste-end tax. We hope we would have an opportunity to comment on any proposed amendments, and would work with the committee staff to develop an administratively—the best administratively possible tax.

Thank you.

The CHAIRMAN. Thank you.

[The prepared written statement of Dr. Pirages follows:]

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1730 Rhode Island Avenue, N.W., Tenth Floor, Washington, D.C. 20036 • 202/659-4613

STATEMENT OF

SUELLEN W. PIRAGES, Ph.D.
DIRECTOR

INSTITUTE OF CHEMICAL WASTE MANAGEMENT

BEFORE

U.S. SENATE COMMITTEE ON FINANCE

September 19, 1984

An Institute of the National Solid Wastes Management Association

Mr. Chairman and members of the Committee, my name is Suellen Pirages, I am Director of the Institute of Chemical Waste Management, a component of the National Solid Wastes Management Association. The Institute was formed to promote proper management of hazardous wastes and has as its members those commercial firms engaged in all aspects of waste management, including removal and remedial responses.

The Institute is pleased for the opportunity to testify before you on the reauthorization of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). We believe that an expanded CERCLA cleanup program should be reauthorized as soon as possible, and we believe the bill reported out by the Senate Environment and Public Works Committee is one deserving of Senate support. It apparently is based on a level of effort that the Agency considers capable of completing.

Without question, there is major national concern for proper management of hazardous waste, and rightly so. Not only has the potential threat from mismanagement of hazardous waste been recognized, but there is only a beginning being made in cleanup efforts, to remedy problems of past management and to license facilities in accordance with tough new standards under the Resource Conservation and Recovery Act (RCRA). EPA data indicate that only a few waste management facilities have received final permits. Small wonder that the public does not distinguish between the "problem" sites of the past and the "solution" sites licensed under RCRA. These two programs are inextricably entwined. Progress in licensing management facilities and in cleanup efforts will reassure the public that the job can be done and done right.

Our testimony will address two issues relevant to this Committee's jurisdiction: the continuation of the Post-Closure Liability Trust Fund (PCLTF) and the concept of a waste-end tax.

POST-CLOSURE LIABILITY TRUST FUND

Although the PCLTF is contained in CERCLA, it is actually essential to the system of hazardous waste regulation that we have in place today under RCRA. The Fund was created by Congress in 1980 to ensure that monies always would be available should any sites, being permitted today, require remedial action after closure. The fund also provides for compensation to injured parties. If the new RCRA regulations produce their desired effect, the need for remedial action will be minimal. However, the American public has a right to expect that funds would be readily available should problems develop.

The PCLTF is as important today as it was in 1980, and its continuation is supported by government groups such as the National Governors' Association, National League of Cities and National

Association of Counties, by industry groups such as the Chamber of Commerce, Chemical Manufactures Association and National Association of Manufacturers. A list of associations that have actively expressed their support for a PCLTF with certain modifications is attached. We believe that the provision to eliminate the Fund, contained in the House bill HR 5640, is a misguided attempt to provide further disincentives for land disposal of hazardous wastes.

Mechanisms for financial responsibility are essential to a program for regulating land disposal sites. The PCLTF is such a mechanism. It is a prepaid, pooled-risk fund managed by the federal government. Monies are collected from an operator during the active life of a facility at the rate of $2.13 per dry weight ton. The tax is collected from interim status land disposal facilities and those few facilities with final RCRA permits. Only those sites that operate with a final RCRA permit, remain trouble-free, and do not pose a threat to public health can qualify for entry into the Fund. The operator of a facility remains responsible for monitoring and maintenance activities for thirty years after closure of the facility. The Fund is currently capped at $200 million.

It is generally agreed that the cost of long-term protection of a site should be internalized in the cost of disposal, as best as these costs can be predicted. This internalization eliminates any unintentional subsidies of land disposal. Since the probability is low that any one site will require subsequent expenditure of funds, the concept of a pooled fund is appealing.

Today, there are no financial mechanisms, either actually or conceptually available that could cover the perpetual liability of a closed hazardous waste disposal site. In 1982, the US Department of the Treasury made that determination after completing a Congressionally mandated study. We have attached that determination for the record. Environmental impairment liability insurance, a relatively new development for "non-sudden" occurrences, is available during operation of a facility, but is not available at all for facilities after closure. It is a one-year policy with no guarantee of renewal. Even during operation of the facility, this insurance is sold on a claims-made basis, which means that the insured must be paying premiums at the time at which the claim is made. For several reasons indicated in the attached document, the Treasury concluded that the private insurance industry could not, and will not, meet the needs of the public for closed land disposal sites.

We support the national objective expressed in both House and Senate RCRA amendments to discourage disposal of wastes on and into the land. Congress is moving toward passage of amendments to RCRA that will prohibit the land disposal of certain wastes as well as tighten the technological standards of management for land disposal facilities.

Congress has also seen fit to increase the appropriations for hazardous waste programs for FY '84 and FY '85. The regulatory system should be the main driving force to industry's use for environmentally sound management techniques for hazardous wastes.

Treatment processes are widely used today, and will increase in the future. However, there will always be a need for some land disposal capacity for the disposition of treatment residues, many still classified as hazardous, and for those wastes that cannot be treated or destroyed. Certainly in the near future, treated waste residues will continue to be disposed as though they were hazardous wastes. For any land disposal facility, there will be a continuing liability. Although we don't anticipate that a RCRA permitted facility will require extensive remedial action after closure, the public has the right to expect that there will be funds available to meet any unanticipated problems.

The argument has been made that existence of the Fund encourages planned obsolescence at disposal facilities, that sites will only be designed to last as long as the operator retains liability. This is not true. If the Fund were abolished today, the level of performance as required by the federal government for disposal facilities would not change. The stringent regulations developed by EPA would still be met as a condition for receiving an operating permit.

What if there is no Post-Closure Liability Trust Fund? If there were no guaranteed source of monies to cover residual risks, any future remedial action would have to be initiated through Superfund -- either as an enforcement action against the operators or a fund-financed cleanup action. Of course, an enforcement action is only possible if facility owners or operators can be identified. Because the extent of environmental contamination for new RCRA permitted sites is likely to be much less than at current CERCLA sites, a fund-financed action is unlikely, but still possible. Will Superfund still be in existence decades from now, when problems might be expected to occur? Can we guarantee that a site owner will be around forever? Certainly not in the case of an individually-owned site; even corporations have been known to cease to exist.

Elimination of the Post-Closure Liability Trust Fund means playing the lottery -- taking the chance that an operator will be able to pay for cleanup and compensation. How much more effective it is for the public to have a ready source of monies -- paid by the responsible party -- available without question, without necessary administrative enforcement actions, and without litigation, to address any environmental problems at the sites immediately. The asbestos plaintiffs in the Manville case would have benefitted, if such a fund had been established forty years ago.

There are some aspects of the fund that could be re-evaluated. Currently, the fund is capped at $200 million. An increase in the cap, or removing it altogether should be considered. No one can predict today what the demands on the fund might be, but it is essential that the size of the fund be perceived as sufficient to cover potential cleanups and compensation. By enabling industries that must dispose of hazardous waste to manage their long-term liabilities, responsible companies will be able to continue operations and will be encouraged to engage in the best waste management practices.

WASTE-END TAX

Nearly everyone would agree that the Hazardous Substance Response Fund as authorized by CERCLA in 1980 will not be sufficient. Although nearly 600 sites have been included on the National Priority List (NPL), there are more sites waiting to be fully evaluated for inclusion. Although most sites on the existing list have received some attention from EPA, in most cases, actual cleanup for many sites will only take place far down the road. There is only a little more than a year left in the original five year program, and yet "final" cleanup has taken place at only a few sites.

If adequate funding for Superfund is the prime objective of this Committee, the ICWM must insist on a stable funding source. The present feedstock tax has proven to be an administratively simple, steady source of revenue. Because the IRS must track only about 800 taxpayers in collecting the feedstock tax, it has not been necessary to increase the IRS budget. We believe that the front-end tax concept is a sound one, and should be improved by expanding its base, increasing rates where appropriate, and addressing the concerns many industries have expressed about competing imported products made from these feedstocks.

The Senate Environment and Public Works Committee has suggested that this Committee examine a waste-end tax as a supplement for a feedstock tax. These taxes undeniably have a political and emotional appeal but their real value is questionable. In fact, waste-end taxes can create undesirable distortions in current waste treatment and disposal practices. The Institute opposes waste-end taxes both on practical and policy grounds. First and most important, as a revenue raising measure, waste-end taxes have not been successful. In every case where applied, states have realized significantly less revenue than forecasted. In at least one case, collection costs even exceeded revenues. In all cases, the states have been forced to search for additional funds.

There are several possible reasons for revenue shortfalls: 1) estimated quantities of wastes on which the tax fees were based may have been in error; 2) the influence of a tax itself on waste production and management tends to reduce the incoming revenue; 3) illegal evasion of the tax may be a factor; 4) loopholes in the tax rules reduces the amount of taxable wastes. The exact reasons for revenue shortfalls are unknown, but there seems to be general agreement that a waste-end tax will not provide a reliable and predictable source of revenue.

One of the major reasons Congress adopted a feedstock fee, rather than a waste-end tax in 1980, was the relative immaturity of the federal hazardous waste program, and the possibility that a waste-end fee might provide incentives for noncompliance. Although there has been progress in identifying and tracking wastes, the possibility for exemptions from system control remain. For example, a waste-end tax could increase the economic incentive for an industry to seek a political solution either by legislatively exempting their wastes, or through regulatory delistings. Thus, a reduction in the universe of hazardous waste would require increases in the waste-end tax. Serious inequities among industries likely would result. Also, if a consideration of hazard levels were not incorporated into a tax rate, certain industries could be disadvantaged.

The philosophy of using waste-end fees to provide incentives for proper waste management disintegrates when the actual administration of such fees is considered. Let me provide two examples. First, large amounts of dilute aqueous waste are disposed in underground injection wells. Depending on discharge limits, some of these wastes could be further diluted and discharged either directly to surface waters or into publicly owned treatment works. Should this occur as a result of imposing a waste-end tax, the main effect would be to divert waste from proper management and control to drinking water sources. Second, some waste treatment processes increase the volume of the waste while decreasing the level of hazard. In this case, a higher tax would be paid on less hazardous waste, thus resulting in disincentives for treatment.

There are a number of practical administrative questions of particular concern to the commercial waste disposal industry, which handles diverse waste streams. For example, there are vast differences in definitions of hazardous waste between federal and state programs. It is unclear how a tax could differentiate among these differences. As taxpayers, record keeping would be highly complex. At off-site facilities, operators will be faced with determining which wastes are subject to the tax, and which are not. He will have to rely on the generator identifying the origin of those wastes. For on-site disposal facilities, those that receive 96% of all hazardous wastes and where manifests may not be required, verification of taxation may be difficult; evasion of the tax may be difficult to detect also.

If the intent of a waste-end tax is to increase revenues for the Superfund, other ways exist to broaden the tax base through front end taxes. The options paper prepared for the Environment and Public Works Committee explored some of them. A corporate surcharge is another possibility. The tax base for these options could be large enough to provide a stable supplementary source of revenue. We believe taxes which are imposed on products or corporate income will be harder to evade than taxes on waste, including the proposal of Allied Corporation to tax garbage.

Should a waste-end tax be included in the final bill emerging from this committee, we would like to identify certain pitfalls and implications of certain decisions.

1) The best way to insure that no waste escapes taxation is to collect the tax at the point of generation, not disposal. A tax collected at a disposal site provides the greatest incentives for improper management. In addition, although the commercial waste industry involved in final disposal will try to pass on the tax, to the extent it cannot do so, generators will not be internalizing that cost.

2) If the tax is to be collected from the disposal facility, it should be made absolutely clear that the tax is collected at the point of disposal only, not when waste is accepted for storage or treatment (including incineration). All treatment residues required to be disposed at a Subtitle C facility, including residues of incineration and other treatment technologies, should be taxed.

3) There is one technology of waste management, which can be both a treatment and a disposal method -- surface impoundments. The owner/operator of a surface impoundment must declare the impoundment either as a treatment facility with wastes removed for ultimate disposal elsewhere or a disposal facility with wastes remaining in the ground after closure. If collection is at the disposal site, a tax would not be collected on the first (though a tax would be collected at another disposal facility for disposal of the dredged wastes), but would be collected on the second. That is as it should be. However, it may happen that an operator decides not to dredge the wastes, and closes the facility as a disposal site. No tax would have yet been collected on this waste. If the tax is paid only on the weight (if that can be determined) of remaining waste, the full amount of the tax will not be collected, and perhaps even more important the tax has not been charged to the customer.

4) We support the use of the metric ton measure rather than the dry weight ton proposed by some. We presently are forced to collect the Post-Closure Liability Tax on a dry weight basis, and it is fraught with problems. Most of our members have chosen to collect the tax as if the entire weight were waste -- in essence using the simple ton measure. Those favoring the use of dry weight ton have some valid arguments, particularly that the rate of tax for underground injection on a metric ton basis is too high because of the aqueous nature of the

wastes. We suggest that this problem be addressed by adjusting the rate of tax and matching the unit of measure to that reported on the RCRA manifest, for example, gallons.

5) Finally, it should be made clear that documents required by IRS to audit proper collection of a waste-end tax should be those already in use in the RCRA system. In order to have a chance of working administratively, waste-end regulations should track RCRA wherever possible. If changes in RCRA documentation are needed, such as may be the case for operating logs for on-site facilities, IRS and EPA must work closely together to make sure that the systems remain the same.

You can see that a waste-end tax is not a simple undertaking; we fear that such a tax actually could subvert rather than complement the existing RCRA regulatory system. The experiences of the commercial waste industry in those states with waste-end taxes have not been good. Direct discrimination against commercial waste management facilities -- where tax rates are higher -- has been common. Although waste-end taxes proposed in this Congress do not set differential rates based on whether the waste is managed on-site or by a commercial firm, we believe that there are enforcement biases and institutional factors that may differentiate indirectly. That means that the small and medium sized businesses, the 84 percent of all hazardous waste producers in the country that use our services, are also disadvantaged.

There is no way to tax any foreign industry within a waste-end taxation system. This magnifies the concerns expressed by the petrochemical industry about foreign competition within U.S. markets. This is the concern of our customers as well with a waste-end tax, but one that can't be solved in the same manner as within a feedstock taxation system.

Our hazardous waste program is finally beginning to work as Congress envisioned. Waste generators already are reacting to the increased cost of treatment and disposal by changing production processes to reduce waste generation, by recycling or recovering practices. When all facilities are given final permits under the new amendments to the RCRA, the economic incentive of regulatory compliance will be that much stronger. Generators do not need the incentives that many contend a waste-end tax might provide. State and Federal regulations already provide these incentives. Both the CERCLA and RCRA programs are just beginning to work; it seems to be a poor time to initiate experimental taxation practices.

June 8, 1984

The Honorable John D. Dingell
Room 2221
Rayburn
Washington, D.C. 20515

Dear Representative Dingell:

The Energy and Commerce Committee will soon consider H.R. 5640 to extend and expand the Superfund hazardous waste program. Among the proposed changes is one which would eliminate the Post-Closure Liability Fund, a fund established by Congress in 1980 to protect the public against the long-term potential for problems from closed, RCRA permitted disposal facilities.

The Post-Closure Liability Fund is badly needed. There is no insurance or other guarantee that can assure that money will always be available to clean up these facilities. No alternative program of public protection is proposed in its place.

The Post-Closure Liability Fund is a long-range program, since there are no facilities likely to qualify in the near future. Thus, Congress has time to review the program and the operation of the Fund. Under the circumstances, we urge that you remove Section 502 from the bill, thereby rejecting the proposal to terminate the Post-Closure Liability Fund.

Sincerely,

AMERICAN PETROLEUM INSTITUTE

AMERICAN TEXTILE MANUFACTURERS
INSTITUTE

CHAMBER OF COMMERCE OF THE
UNITED STATES OF AMERICA

CHEMICAL MANUFACTURERS
ASSOCIATION

GOVERNMENTAL REFUSE COLLECTION
AND DISPOSAL ASSOCIATION

NATIONAL ASSOCIATION OF LOCAL
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Mayor Seattle, Washington

Executive Director
Alan Beals

June 11, 1984

The Honorable James Florio, Chairman
Subcommittee on Commerce, Transportation and Tourism
U.S. House of Representatives
House Annex 2, H2-151
Washington, D.C. 20515

Dear Mr. Chairman:

On behalf of the National League of Cities and the 15,000 cities we represent, I would like to express our support for reauthorizing the Superfund program and for some of the most critical provisions in H.R. 5640.

NLC's Energy, Environment and Natural Resources Steering Committee met recently and, following an excellent presentation by Rena Steinzor of your staff, reviewed our current policy on Superfund in light of recent legislative developments.

First, and foremost, the Steering Committee unanimously supported a $9 to $12 billion Superfund. To support these increases in Superfund, our committee recommends that the feedstock tax rate be increased, that some of the current exemptions from the tax be eliminated, and that taxes be levied on some of the new chemicals deemed by EPA to be hazardous. The Committee, however, does not support a waste end tax. Their apprehension about such a tax stems from their perceptions that it is neither a stable nor reliable source of funds and that a waste end tax may result in under-reporting or illegal dumping of hazardous wastes.

Second, the committee supports the provisions in H.R. 5640 that measure the level of clean-up against existing environmental standards at every site, and that timetables for clean-up be statutorily mandated.

Third, the committee expressed support for the proposed changes in state requirements incorporated in H.R. 5640 such as the 90-10 federal-state match for long-term O & M costs, the deletion of state feedstock tax pre-emption, and applying the 50 percent match requirements only where states own and operate sites. In

Past Presidents: Tom Bradley [illegible] • Ferd L. Harrison [illegible] • William H. Hudnut, III [illegible] • Henry W. Maier [illegible] • Jessie M. Rattley [illegible] • John P. Rousakis [illegible] **Directors:** John B. Andrews [illegible] • Arden Ashley [illegible] • Marion S. Barry, Jr. [illegible] • Robert A. Cantone [illegible] • Henry Cisneros [illegible] • Joe W. Davis [illegible] • John P. Franklin [illegible] • William F. Fulginiti [illegible] • George D. Goodman [illegible] • Edwin L. Griffin, Jr. [illegible] • Daniel E. Griset [illegible] • Richard Guthman, Jr. [illegible] • Charles Hoyt [illegible] • Delores Hudson [illegible] • Robert M. Isaac [illegible] • Luther G. Jones, Jr. [illegible] • Peter C. Knudson [illegible] • Dud Lastrapes [illegible] • Pamela P. Plumb [illegible] • Paul A. Lang [illegible] • E. A. Mosher [illegible]

addition, however, our committee believes that state and local governments be given greater authority in planning and implementing Superfund response actions.

The Committee did, however, express concern that H.R. 5640 does not continue the current post closure liability fund. Their concern for continuing the fund is based on the supposition that liable parties may no longer be available should problems develop years after a site is closed.

The city officials serving on our committee believe that the $200 million cap on the fund should be lifted to allow revenue to accumulate in the fund and that liability not be transferred until 15 years after site closure. They believe this change would encourage RCRA owners and operators to provide adequate long-term protection for closed sites, which the current provisions do not.

In addition, the Committee expressed reservations about both a waste end tax and victim compensation arrangements.

The Committee was concerned that enactment of a victim compensation proposal had the potential to open the floodgates to innumerable claims. Other city officials believe that any such program should address not just environmental injury claims and that such a program should not be administered by EPA.

We congratulate you on the many obstacles you have overcome to bring reauthorization of Superfund to a successful conclusion this year. We support your efforts and look forward to continuing to work with you towards this end.

Sincerely,

Alan Beals
Executive Director

NATIONAL
ASSOCIATION
of
COUNTIES

440 First St. NW, Washington, DC 20001
202/393-6226

COPY

June 11, 1984

The Honorable John D. Dingell
United States House of Representatives
2221 Rayburn House Office Building
Washington, D. C. 20515

Dear Congressman Dingell:

On the eve of the mark-up of H.R. 5640, which will extend and expand the Superfund Hazardous Waste Program, the National Association of Counties reaffirms its strong support for reauthorization this year. We believe that the level of funding provided in the bill is the minimum amount needed to begin cleaning up sites currently on the national priority list.

We further support the combination of a feedstock tax with a waste end tax as a way of both increasing the size of the fund and providing incentives for alternatives to landfilling of hazardous wastes.

Among the proposed changes in H.R. 5640 is one which would eliminate the Post-Closure Liability Fund. The fund was established in 1980 to protect the public against long-term potential problems from closed, RCRA permitted disposal facilities. Without this long-term guarantee, counties and local governments will be placed at financial risk should the responsible parties not be available to pay for post-closure corrective actions. Therefore, we support the retention of the Post-Closure Liability Fund and urge that you delete Section 502 from the bill.

There is a strong consensus among our elected officials who have responsibility for environmental and public health protection that Superfund ought to be reauthorized now. We applaud and support your efforts to reach this goal.

Sincerely,

Matthew B. Coffey
Executive Director

MBC:ew

AMERICA'S
COUNTIES

ASIA

AUTOMOTIVE SERVICE INDUSTRY ASSOCIATION
444 North Michigan Avenue, Chicago, Illinois 60611 (312) 836-1300

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RICHARD F. TURNEY
WASHINGTON REPRESENTATIVE

VIRGINIA B. BLISS
ASSOCIATE WASHINGTON REPRESENTATIVE

June 8, 1984

Representative John Dingell, Chairman
Energy and Commerce Committee
2125 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Dingell:

The Automotive Service Industry Association, (ASIA), representing over 8,500 independent automotive wholesalers, warehouse distributors, heavy-duty parts and equipment distributors, automotive electric service distributors, manufacturer's representatives, manufacturers and remanufacturers of automotive replacement parts, tools, equipment, chemicals, paint, refinishing materials, supplies and accessories has several areas of concern with H.R. 5640.

ASIA believes the funding goals are over ambitious and that "waste end" taxes are neither appropriate nor feasible. This type of tax gives our foreign competitors one more edge in a market already tilted in their favor.

Other concerns are: 1) The extent that remedies in the law as to "How clean is clean?" go beyond what is necessary for protection of health and the environment. 2) The federal cause of action contained in Title II legislates tort law standards in a harsh and unfair manner by specifying a standard of "strict, joint and several" liability that could force a party responsible for only a small portion of a waste site release to be liable as if he had caused the whole release. 3) The joint and several liability in site cleanups should be more fairly apportioned using guidelines to ensure fairness. 4) The post-closure liability fund should be retained to provide alternative public protection from closed facilities.

It is our understanding that perfecting amendments will be offered to correct some of these inequities. It is our hope that you and your Committee will fully explore these issues and support amendments which could improve and make this legislation more equitable and workable.

ASIA appreciates your help and interest in legislating a reasonable, workable law to benefit the entire country.

Sincerely,

Richard F. Turney

Richard F. Turney

RFT:gb

cc: Entire Commerce Committee

allegations rest, in such detail as to permit the Board to determine their exact nature.

(Catalog of Federal Domestic Assistance Program No. 20.804 Operating-Differential Subsidy (ODS))

By Order of the Maritime Subsidy Board

Dated: December 27, 1982.

Georgia P. Stamas,

Assistant Secretary.

[FR Doc. 82-35459 Filed 12-29-82; 8:45 am]

BILLING CODE 4910-81-M

National Highway Traffic Safety Administration

Denial of Petition to Commence Defect Proceeding

This notice sets forth the reasons for the denial of a petition to commence a proceeding to determine whether to issue an order pursuant to section 152(b) of the National Traffic and Motor Vehicle Safety Act, 15 U.S.C. 1412(b).

On June 3, 1982, John Jupin, Consumer Protection Investigator of the city of Virginia Beach, Virginia, on behalf of Lewis S. Tefft, petitioned for an investigation of a possibly safety-related defect in 1981 and 1982 Plymouth Reliant K vehicles, specifically that premature failure of air conditioning hoses could cause a "blinding white cloud" and possible loss of vehicle control by the operator.

NHTSA believes that the leak that apparently occurred in Mr. Tefft's hoses deposited some air conditioning system refrigerant oil on hot engine components, which entered the passenger compartment while the car was in motion. The agency learned that in May 1981 Chrysler had instituted a service campaign on early 1981 model "K" vehicles because of excessive wear of the air conditioning discharge and suction hoses, and that Mr. Tefft's car was eligible for correction. The manufacturer stated that it was not aware of any accidents, injuries, and instances of loss of vehicle control due to the condition. NHTSA itself found no similar complaints in its files. There being no reasonable possibility that an order of the nature requested would be issued at the conclusion of an investigation, the petition was denied on December 6, 1982.

(Secs. 124, 152, Pub. L. 93-492, 88 Stat. 1470 (15 U.S.C. 1410a, 1412); delegations of authority at 49 CFR 1.50 and 501.8)

Issued on December 22, 1982.

Lynn L. Bradford,

Associate Administrator for Enforcement.

[FR Doc. 82-35171 Filed 12-29-82; 8:45 am]

BILLING CODE 4910-59-M

DEPARTMENT OF THE TREASURY

Office of the Secretary

Hazardous Substance Liability Insurance

AGENCY: Department of the Treasury.

ACTION: Determination on feasibility of private insurance as an alternative to the Post-Closure Liability Trust Fund (PCLF)

SUMMARY: Under Section 107(k)(4)(B) of the "Comprehensive Environmental Response, Compensation and Liability Act of 1980" (Pub. L. 96-510, December 11, 1980) and pursuant to the delegation of authoirity in Executive Order 12316 (August 14, 1981) the Secretary of the Treasury has determined that it is not feasible to establish or qualify an optional system of private insurance for post-closure financial responsibility for hazardous waste disposal facilities at this time.

DATE: Effective on the date the Secretary of the Treasury makes the determination.

FOR FURTHER INFORMATION CONTACT: Mark G. Bender, Room 3025, Department of the Treasury, 15th & Pennsylvania Avenue, NW., Washington, D.C. 20220.

SUPPLEMENTARY INFORMATION: Section 107(k)(4)(A) of the "Comprehensive Environmental Response, Compensation and Liability Act of 1980", or CERCLA, directed the Secretary of the Treasury to undertake a study and make a report on the "feasibility of establishing or qualifying an optional system of private insurance for post-closure financial responsibility for hazardous waste disposal facilities." That report was completed and submitted to Congress in March 1982 (see Part Three, Chapter 6, "Hazardous Substance Liability Insurance," Department of the Treasury, March 1982). It was concluded that at this time private insurance is not a feasible alternative to the Federally-administered Post-Closure Liability Trust Fund established by Subtitle C of Title II of CERCLA.

As required by Section 107(k)(4)(B), the reasons for the determination are reviewed below in a recapitulation of the Secretary s report.

I. The Post-Closure Liability Fund

The Post-Closure Liability Fund provided for by CERCLA was the end-product of major uncertainties faced by Congress in its efforts to provide for new and safe hazardous waste disposal facility capacity. Primary among these uncertainties were: (1) The ability and willingness of private industry to establish new hazardous waste facility capacity under RCRA; (2) the acceptability of new hazardous waste sites by local communities; (3) the distribution of responsibilities for the "perpetual" care and liability attendant to permitted sites; and (4) the availability and affordability of private insurance as a source of financial assurance for such sites.

The Post-Closure Liability Fund addresses many of these concerns by providing funds for the monitoring and maintenance and the assumption of liabilities of properly closed and permitted hazardous waste facilities in perpetuity. Specifically, the PCLF is designed to assume (1) all of the liability attendant to a "qualifying" hazardous waste facility at the end of the 5-year closure period (liability remaining with owners/operators during closure), and (2) the costs of monitoring and maintenance at the end of a 30-year period spanning both closure and post-closure.

II. Private Insurance for the Post-Closure Period

The question at hand is whether or not private insurance as an alternative to the PCLF will be available and affordable for the owners or operators of hazardous waste facilities in the post-closure period. Technically speaking, private insurance would have to extend a range of coverage comparable to the PCLF if it were to be considered as a feasible option or substitute for the PCLF. Given the current structure of the PCLF this means that private insurance would have to meet at least three major criteria.

First, private insurance would have to be available to the owners or operators of all hazardous waste facilities that met the eligibility standards of Section 107(k)—i.e., having been operated under RCRA permit, having been closed in accordance to "plan," and having been maintained for five years after closing without incident. Second, private insurance would have to accept all of the liability of facility owners or operators as imposed by CERCLA and "any other law" in perpetuity and without possibility of termination, this liability becoming effective the fifth year after facility closure. Finally, private insurance would have to provide the financial wherewithal for the monitoring and maintenance of facilities starting thirty years after closing and continuing in perpetuity.

Impediments to Private Insurance

Some of the more significant impediments to the use of private insurance as a substitute for the PCLF are (1) the scope and nature of liability, (2) the difficulties of risk assessment, (3) the need for "perpetual" coverage, and (3) the potential for adverse risk selection.

Liability Considerations. For private insurance to substitute for the PCLF it would have to provide coverage for all claims actionable under "superfund" as well as all claims actionable under any other (common or statutory) law. Insurance coverage therefore would have to extend to all costs of removal or remedial action incurred by Federal or State authorities consistent with the National Contingency Plan, other necessary costs of response incurred by any other person consistent with the National Contingency Plan, damages for injury to, destruction of, or loss of natural resources, and, in addition, liabilities arising from all personal injury and property damage claims of third persons.

Accordingly, the problem of uncertain and potentially unlimited liability may be even greater under the PCLF standard than is the case under "superfund" *per se.* For one thing, a broader range of liabilities would be specifically open to action under Federal statute. For another, if private insurance were to substitute for the PCLF as now constituted, the owners or operators of "qualified" facilities could ultimately "walk away" from all liabilities. This means that the private insurance company must be prepared to "stand in the shoes" of the owner/operator, and in so doing render meaningless the normal limits, exclusions and defenses contained in standard insurance policies. If such a risk is assumed at all it would probably require significantly higher, perhaps prohibitive, premiums.

Risk Assessment. The problem of risk assessment as a barrier to the insurability of closed hazardous waste facilities can be expected to vary over time, being of minimal consequence at the time of closing but growing in importance throughout the post-closure period. The fact that owners or operators must monitor and maintain closed sites for a period of thirty years is an assuring factor in this respect. But once beyond this period there are no requirements that owners/operators undertake the expense of loss prevention measures, and the risks of facility deterioration will be increasing with time. Insurers have argued that the difficulties of such long-term risk assessment would be a significant barrier to private insurance as a substitute for the PCLF.

Perpetual Coverage. Pollution insurance coverage is currently extended on a "claims-made" basis only. But, significantly, the claims-made policy will honor only those claims presented during the effective term of the policy itself (unlike the occurrence-based policy, which will honor claims traceable to an incident which occurred while the policy was in effect whenever such claims are presented). Since this term is generally set for one year at a time, and since the policy may not be reissued for any number of reasons at the end of its term, the claims-made policy is uniquely unsuited to provide the type of perpetual coverage which is to be made available by the PCLF.

For one thing, the claims-made policy requires both an insurer willing and able to underwrite the risk of the closed facility year-after-year in perpetuity and an insured willing and able to pay premiums on a closed facility year-after-year in perpetuity. Practically speaking, these conditions may be difficult if not impossible to meet. Insurers as well as insureds may cease to exist over time, leading to temporary or even permanent interruptions of facility insurance coverage. Another likelihood is that as closed facilities deteriorate over time the underwriting risk will increase commensurately, forcing insurers to protect themselves in terms of ever-higher premiums. Such a cycle of events could lead rapidly to an affordability problem for insureds which effectively interrupts insurance coverage. Finally, the increasing burden over time of providing for the insurance coverage of a closed facility may lead some owners or operators to "abandon" that facility. In all of these cases the financial responsibility for the closed facility is likely to revert to the public sector.

Adverse Risk Selection. Another frequently-cited problem which may arise if a private insurance option to the PCLF is qualified is that of "adverse risk selection." The most common argument is that the higher-risk facilities will use the PCLF while lower-risk facilities will rely on private insurance. If this type of situation were to develop, it is argued that the financial integrity of the PCLF would be undermined, since fees collected from low-risk facilities would not be available to compensate for the disproportionate exposure of the high-risk facilities.

Variations on Private Insurance

The purchase of commercially-provided private insurance is not the only insurance option open to potential insureds. Other private-sector insurance arrangements may include self-insurance, captive insurance companies, pooling of risks, assigned risk pools, and so on. But attempting to use any of these options as an alternative to the PCLF encounters many of the same shortcomings apparent in the analysis of the commercial insurance market.

For example, self-insurance as an option to the PCLF may be attractive to certain larger and financially-strong companies. It can be argued that many such companies are as financially "secure" as well-known insurers and that the precedent of self-insurance for pollution risks already exists under Federal regulations. However, even the strongest of firms is unlikely to be able to guarantee coverage of potentially unlimited liability in perpetuity: potential liabilities may well exceed available assets and in changing economic circumstances any firm may cease to exist, effectively terminating insurance coverage.

Captive insurance companies are attractive to some corporations as a means of insuring the risk exposures of the parent on a more cost-effective basis. But for all intents and purposes the captive insurer must operate as would other insurers in the same jurisdiction. Therefore, while some advantages might be realized in terms of affordability and the capability of the insurer to ultimately accept all responsibility for the closed hazardous waste site, the captive is really no better positioned with respect to the major problems of unlimited liability or existence in perpetuity than are commercial insurers.

The pooling of risks as is done currently with the P & I Associations and the recently-formed Pollution Liability Insurance Association would undoubtedly ease the burden of a pollution incident for any given underwriter, but, here too, comparability with the PCLF would be difficult if not impossible to achieve. Again, post-closure liability is uncertain and potentially unlimited, an underwriting problem no more acceptable to mutual associations than to individual insurance companies. And an insurance pool is not much more likely to commit itself to the perpetual, noncancellable coverage of a closed facility than is an individual insurer. Nor can it be guaranteed that all qualified facilities would be accepted as an insurable risk by the pool.

The same insurability problems which pertain to commercially-purchased insurance, self-insurance, captive insurance companies, and the pooling of risks would extend to one degree or another to most, if not all, purely private sector post-closure financial assurance options.

III. Measures to Foster Private Post-Closure Insurance

The analysis suggests that private insurance as a substitute in the entirety for the PCLF may not be feasible in the foreseeable future. The scope and nature of the coverage provided by the PCLF is simply too distinct from that of the traditional property-casualty insurers to be readily assumed by the latter. Therefore, the development of a significant role for private insurance means that either (1) the social goals in support of which the PCLF is designed be scaled back so as to allow substitution in the entirety by private insurance, or (2) the role of the PCLF be redefined so as to allow achievement of the same goals in concert with as much private insurance participation as is feasible at any given point in time.

Scaling Back Social Goals

Under CERCLA the owners or operators of permitted hazardous waste disposal facilities can be exempted from the payment of the PCLF tax if they enroll in any private insurance plan that is deemed to qualify as a substitute for the PCLF. But for all of the reasons discussed in detail previously, private insurance plans are unlikely to be able to substitute for the PCLF at this time. Thus the mutually exclusive insurance arrangements currently called for—i.e., either pay the tax and insure with the PCLF or arrange to purchase equivalent private insurance in lieu of the tax—most probably will leave potential insureds with no choice but the PCLF.

It would seem that as long as the "either/or" insurance arrangement implied by CERCLA remains extant, private insurance as an option may be feasible only if compromises are made, or expectations lowered, with respect to the scope and nature of the coverage required. In short, the insurance coverage requirements would have to correspond much more closely to what the private market reasonably can be expected to provide. As a minimum, therefore, the public policy compromises probably would involve the acceptance of the following: (1) limits on liability for private parties; (2) provisions for cancellable and nonperpetual insurance contracts such as the claims-made policy or the limited-term annuity; and (3) the retention by facility owners and operators of all responsibility for insuring, monitoring, and maintaining their facilities in perpetuity.

However, if measures such as these were to be taken in order to qualify private insurance for post-closure purposes a major complicating factor might be introduced. This complication would be in the form of an extraordinary asymmetry between the coverage available from private insurers and that of the Federally-administered PCLF. Presumably, potential insureds would still have to choose between either the PCLF or private insurance. But the asymmetrical coverages would undoubtedly add to problems of adverse risk selection, cyclical market capacity, uncertain PCLF funding, non-uniform coverage of insured facilities, and overall market instability as insurers and insureds sought out optimum responses to ever-changing tax/premium/coverage relationships.

The cost of bringing a reasonable amount of stability, predictability, and uniformity of coverage to the post-closure insurance situation depicted above would be the diminution of the coverage of the PCLF to something more consistent with private market capabilities, such that the alternative insurance programs would be truer substitutes one for the other. But while doing this may provide for a viable alternative to the financing system of the PCLF, it would also involve a scaling back of the social goals implicit in the PCLF and this would be a matter for serious Congressional consideration.

Redefining the Post-Closure Liability Fund

Private insurance participation in post-closure may well be encouraged and fostered without undue sacrifice of social goals if the functions of the PCLF were to be redefined in ways which served to supplement—rather than supplant—private coverage. For example, the tax-financed PCLF could be altered so as to serve as a "last resort" for claimants. In this case the owners or operators of facilities would continue to demonstrate financial responsibility for closed facilities by means of deductibles, private insurance, and so on. In the event that claims exceeded the limits of the financial responsibility requirements established (by statute or regulation) for owners/operators the additional compensation would be provided by the "fund". The Federally-administered fund might also assume all responsibility for closed facilities at that point in time when private insurance were no longer available (e.g., the termination of the 30-year monitoring and maintenance period).

Alternatively, the PCLF might be restructured to assume the role of a "reinsurer". In this case private insurers might be much more willing to underwrite insurance for closed facilities if they in turn can spread the risk to another party through reinsurance. As noted in earlier analysis, private reinsurance arrangements, such as the Pollution Liability Insurance Association, would encounter many of the same problems with post-closure as any individual insurer. But this would not be the case for a government-sponsored reinsurance program. Thus the PCLF might be designed to pick up any "excess of loss" of private insurers over and above stipulated limits; another variation might have the PCLF provide "stop loss" coverage in which event the primary insurer is protected against losses exceeding an agreed upon percentage.

Finally, the PCLF could be given the role of serving in perpetuity as the "trustee" or "administrator" of all post-closure sites, leveraging its own funds by purchasing private insurance coverage in the commercial market. In this case liability limits would be established and private insurers would be invited to bid on an annual basis for the coverage of closed sites. Loss exposures beyond the established limits, catastrophic losses, and "uninsurable" sites would remain the total responsibility of the government fund, in additon to the payment of premiums for private coverage purchased and the monitoring and maintenance of sites.

Unfortunately, as it turns out none of the combined public/private insurance programs which seem reasonable at this point in time provide a clear and separate alternative to the need to finance via taxes a PCLF-type fund. In the cases of the PCLF as a "last resort" or as a "reinsurer" there would be a need for industry to purchase private insurance as well as finance the government fund (presumably at a new rate of taxation). Whether or not such a combination of payments would be more cost effective than the current PCLF tax alone is not now determinable. And in the case of the PCLF acting as "administrator" industry still would be obliged at least to make a tax payment to finance the fund.

Standards for Private Insurance.

All of the foregoing measures to foster private insurance participation in post-closure could necessitate the establishment of "qualifying" standards or criteria. Until further experience is gained with respect to the nature of the risks and the losses incurred it seems reasonable to expect insurers to be able to respond at least within the limits of the current requirements for operating facilities. At least initially, therefore, any standards which might be developed for private post-closure insurance could probably parallel closely existing RCRA requirements.

IV. Findings and Conclusions

For commercially-purchased private insurance to substitute for the coverage extended by the PCLF, at a minimum it would have to meet the following standards: First, private insurance would have to be available for each and every qualifying hazardous waste site (at the affordable premium). Second, the private insurers would have to be willing to accept an uncertain and potentially unlimited exposure to liability as defined under CERCLA and "any other law". Third, private insurance would have to provide financial assurance for liability and, after thirty years, monitoring and maintenance in perpetuity. Finally, in order to allow the owners or operators of qualified facilities to "walk away" from all future responsibilities for such sites, private insurers would have to "step into the shoes" of owners or operators and effectively assume all managerial responsibilities for insured sites.

Nothing in the materials submitted for this study suggested that this type of comprehensive private insurance option for the PCLF is feasible now or in the foreseeable future. This observation applies equally to commercially-purchased insurance and insurance variations such as self-insurance, captive insurance, and others.

Determination: Under Section 107(k)(4)(B) of CERCLA the determination of whether or not it is feasible to qualify a private insurance option for post-closure financial responsibility is to be made "after a public hearing." On May 5, 1982, a public notice was published (See 47 FR 19504) stating that a public hearing on this issue would be held on June 2, 1982 in the Main Treasury Building, Washington, D.C., if interested persons wished to make an oral presentation. The notice also stated that any written data that interested persons wished to submit in lieu of making a presentation at a hearing would be considererd, provided that such comments were received by June 9, 1982.

Since no person requested to make an oral presentation, a public notice of cancellation of the scheduled public hearing was published (See 47 FR 23842). Since no materials or additional information which have been presented since the publication of the Secretary's report would cause any significant alteration in the findings of that report, the Secretary of the Treasury determined that it is not feasible to establish or qualify an optional system of private insurance for post-closure financial responsibility for hazardous waste disposal facilities at thjs time.

Mark G. Bender,

Acting Deputy Assistant Secretary, Office of Financial Institutions Policy.

December 27, 1982.

[FR Doc. 82-35471 Filed 12-29-82; 8:45 am]

BILLING CODE 4810-25-M

Comptroller of the Currency

[Docket No. 82-27]

Termination of Closed Receivership Fund; Second Notice

Note.—This document originally appeared in the Federal Register of December 23, 1982. It is reprinted in this issue at the request of the agency.

AGENCY: Comptroller of the Currency, Treasury.

ACTION: Notice of termination.

SUMMARY: Notice is hereby given that all rights of depositors and other creditors of national banks which have been closed and for which the Comptroller has appointed a receiver other than the Federal Deposit Insurance Corporation to collect liquidating dividends from the "closed receivership fund" shall be barred after twelve months following the date of the fourth publication of this notice.

FOR FURTHER INFORMATION CONTACT: Howard J. Finkelstein, Attorney, Legal Advisory Services Division, Comptroller of the Currency, Washington, D.C. 20219, (202) 447-1880.

SUPPLEMENTARY INFORMATION: Pursuant to Section 409 of the Garn-St Germain Depository Institutions Act of 1982, Pub. L. 97-320 (October 15, 1982), notice is hereby given that all rights of depositors and other creditors of closed national banks to collect liquidating dividends from the "closed receivership fund" will be barred after twelve months following the date of the fourth publication of this notice.

Sections 721-723 of the Depository Institutions Deregulation and Monetary Control Act of 1980 clarified the status of the "closed receivership fund" by establishing a procedure for the satisfaction or cancellation of all outstanding claims for liquidating dividends and the termination of the fund. However, the 1980 law applied only to national banks closed on or before January 22, 1934. After the law was passed it came to the Office's attention that there had been at least one bank closed after the above date for which the Comptroller appointed a receiver other than the Federal Deposit Insurance Company. The office therefore sought clarification of the 1980 law from Congress. Congress provided such clarification in Section 409 of Pub. L. 97-320 by striking the date of January 22, 1934 from the statute and substituting therefor the phrase "which have been closed and for which the Comptroller has appointed a receiver other than the Federal Deposit Insurance Corporation."

Under the provisions of the amended law, the Office will publish notices in the Federal Register once each week for four consecutive weeks that all rights of depositors and creditors of the fund will be barred after twelve months following the last date of publication of such notice. This is the second such notice. During this twelve month period, the Office will accept claims for liquidating dividends from the fund. A claim should consist of a Proof of Claim form received from the receiver at the time of the bank's closing or other acceptable evidence of an unsatisfied claim. Claims should be sent to the attention of Mr. Robert L. Teets, Manager, Accounting Programs, Office of the Comptroller of the Currency, 490 L'Enfant Plaza East, S.W., Washington, D.C. 20219.

Following the close of the twelve month period, all unclaimed dividends, together with income earned on liquidating dividends and other moneys remaining in the fund, will be covered into the general funds of the Office.

Dated: December 2, 1982.

C. T. Conover,

Comptroller of the Currency.

[FR Doc. 82-34733 Filed 12-22-82; 8:45 am]

BILLING CODE 4810-33-M

VETERANS ADMINISTRATION

Veterans Administration Wage Committee; Meetings

The Veterans Administration, in accordance with Pub. L. 92-463, gives notice that meetings of the Veterans Administration Wage Committee will be held on: Thursday, January 6, 1983; Thursday, January 20, 1983; Thursday, February 3, 1983; Thursday, February 17, 1983; Thursday, March 3, 1983; Thursday, March 17, 1983; and Thursday, March 31, 1983.

The meetings will begin at 2:30 p.m. and will be held in Room 304, Veterans Administration Central Office, 810 Vermont Avenue, NW., Washington, DC 20420.

The **Chairman**. Senator Roth.

Senator **Roth**. Thank you, Mr. Chairman.

This morning we opened the hearing with Mr. Florio's testimony, at which time the question was raised, Mr. Forney, with respect to the impact of the House legislation on the chemical industry. And if I understood Mr. Florio correctly, he did not see the House proposal having any significant adverse impact on the chemical industry. This is somewhat in conflict, I would point out, with the statement by the OTA, the Office of Technological Assessments, a congressional committee, where it says that:

> An expanded program of the order of $10 billion over five years based largely on an extended list of feed stocks and greatly increased rates of taxation on feed stocks run a definite risk of having significant negative impacts on industry.

I wonder if you would care to comment as to how you see this proposed legislation impacting both on the industry and on employment in the United States?

Mr. **Forney**. The impact of the expanded list of feed stocks is one that is more properly commented upon by people out of the chemical industry, and the mining industry, and so on because most of the items on the expanded list are items that are not important to the chemical industry. And so I would like to address my remarks to the greatly increased rate of taxation that is proposed with respect to the existing list of feed stocks.

This has been a very troubled period, during the time since Superfund was passed, for the chemical industry. And, in particular, for the petrochemical portion of the chemical industry that is taxed by Superfund.

I believe you heard mention this morning that total employment in the chemical industry has dropped by some 50,000 people during the past 2 to 3 years, during the recession.

Senator **Roth**. 50,000 out of how many?

Mr. **Forney**. 50,000 out of approximately 1.1 million. We have looked at the increased level of taxation that is proposed in H.R. 5640, and attempted to evaluate the effect of that on our industry as we look, as I said, in particular at the increased rate of taxation of those feedstocks that are already taxed. We believe that it would place in very, very high jeopardy the shutdown of some 4 billion pounds of capacity for these primary feedstocks, and would place in jeopardy, very severe jeopardy, the jobs of another 30,000 employees in these primary petrochemical feedstocks.

It would also mean that something in the neighborhood of a million of employees of Dow, who are involved in the manufacture of downstream products in the chemical industry and elsewhere, would be much more dependent than they are today on foreign source materials.

So we see the impact as very, very great indeed, Senator, and one that should be avoided, we believe, at all cost.

Senator **Roth**. Well, can the negative adverse impact be offset by some kind of a tax on imports?

Mr. **Forney**. Our belief is that it is very unlikely that this can be accomplished. Our experience is that in the foreign trade area when one attempts to impose a tax on a derivative product, say a derivative of ethylene, the next thing that happens is—when you impose a tax on, say, ethylene glycol or vinyl fluoride monimer (phonetic), which are first order derivatives, the foreign trade immediately moves downstream to the next product. It moves downstream to polyvinyl fluoride, or it moves downstream to polyethylene carathelic (phonetic), to the next product. There is no end to our chasing of the derivative products downstream that would be caused if we started into that.

I do not believe that import taxes on derivative products are an answer to this problem at all.

Senator ROTH. And even if it were, wouldn't we still have a problem in being competitive in our exports of these products? And also would this tend to promote the idea that American companies ought to produce such products out of country? Would it have that at least financial effect?

Mr. FORNEY. The chemical industry has prided itself for many decades in this country on being a very efficient, up to date, technologically active industry. We have consistently produced a large positive balance of trade. We produce this large balance of trade by being competitive both in our home market and very, very competitive abroad. So the impact that we face from unfair or very high superfund taxes on these primary petrochemicals are bound to affect us in both places. There is no question about that. The amount of capacity that I talked about being at risk and the number of jobs being at risk were our estimate of the combined effect of what we would lose in our own market and in our increased inability to compete abroad. We are losing on our positive balance of trade. We have lost since Superfund came into effect some approximatelv $5 billion from a $15 billion balance of trade that we had in 1980.

And that rate of loss is accelerating. I would not pretend at all to you that the strong dollar is not the strongest effector of this decreased positive balance of trade. But, nonetheless, the effect of Superfund taxes has been significant and at the rates proposed in H.R. 5640 would be very, very significant indeed.

Senator ROTH. Mr. Chairman, I have further questions that I will submit.

The CHAIRMAN. Senator Long.

Senator LONG. I'll pass.

The CHAIRMAN. Can I just ask one question? That's about passing the tax on. What's the problem with that?

Mr. FORNEY. Our problem with passing the tax on is that this is an international trade arena, Mr. Chairman. That there is no way that we can pass this tax on when we look at the competition that is coming to us from these first and second derivative products from abroad. They are not subject to the tax, and we must compete with them. So there is just no way, in our opinion, that we can pass these taxes on. This has been very clear to us in the period of operation that we have had with Superfund, and there is no question in our minds that it would become an even greater problem at the much higher tax level proposed in H.R. 5640.

Senator LONG. Might I just interrupt to ask you to illustrate that in a way that would be more graphic? People who don't understand your business as well as you do have difficulty understanding precisely what you mean.

What about, for example, a plastic product that is made into a hose after it leaves your plant. You are competing with a foreigner for the sale of the hose as well as for the sale of the chemical out of which the hose is made. Is that the kind of thing you are talking about? I'm just not sure that a person reading the record will understand from the generality of your language just what that means.

Mr. **Forney**. Let me try a specific example, Senator, and one that I think is fairly straightforward and one that we encounter all the time in our everyday lives.

Ethylene is one of the primary petrochemicals that is subject to Superfund tax. Now ethylene is made very commonly into a material called "VCM," or vinyl fluoride monimer. Vinyl chloride monimer is made into polyvinyl fluoride. Polyvinyl fluoride, chips of plastic, is made into a lot of very useful materials in our society, probably the most common which are water pipes and siding for houses.

Now the reason that we can't compete in this area if we are subject to very, very high taxes on our ethylene is that the people who are not subjected to those taxes, people in Europe, the people in Taiwan, what they are going to do is shift to this country the vinyl fluoride monimers. And even more likely they are going to ship to this country the polyvinyl fluoride or even more likely than that, ship the pipe or the siding. That's what they will do.

The **Chairman**. Senator Bradley.

Senator **Bradley**. Thank you very much Mr. Chairman.

I would like to ask Mr. Forney, if he could, to try to think through with us the revenue issue. We, say, are going to look for somewhere between $5 and $10 billion. Pick the low end, if you want. And the real decision we have to make is what portion of that is on feedstock, what portion from general revenue, and what portion from maybe waste end.

How would you advise us? What percent do you think should be from feedstock and from general revenue of any package that we would decide on?

Mr. **Forney**. Let me summarize my written testimony in that regard, Senator Bradley. We believe that the existing list of feedstocks—that is to say those that are taxed under the present superfund law can and should be continued to be taxed at the present level, but not above that level.

Senator **Bradley**. And that over 5 years generates about $1.6 billion. Is that correct?

Mr. **Forney**. Yes; roughly.

As I mentioned before, expanding that list of feedstocks to include a number of other materials that are not now subject to any tax at all is something perhaps more properly addressed by others because many of them are not an important issue to our association. But it is possible that some amount of revenue could be raised from those sources.

The Chemical Manufacturers Association supports very actively the concept of a waste-end tax. And I would like to speak to that to some extent.

Senator **Bradley**. And as you speak to it, could you speak to the collection element of it?

Mr. **Forney**. Yes.

The existing Superfund law has a waste-end tax in it. It is called the "post-closure trust fund," or something of that kind. This tax is being collected at the present time. It is being collected and collected quite successfully from a number of payers in spite of the fact that there has been no real enforcement effort aside from publication in the Federal Register to attempt to get people to pay the tax.

It's collected at the rate of $2 per dry weight ton. Approximately $2½ million in the last quarter, roughly an annual rate of some $10 million.

The specific proposal of the Chemical Manufacturers Association is that this tax be levied at a rate not at $2 per dry weight ton, but $50 per dry weight ton. And it is our belief, based on the actual collections to date, a modestly more effective or vigorous enforcement policy, plus an inclusion in that tax of ocean dump material, and an inclusion in that tax of material stored for a year or more, now not included in that tax. This tax would produce somewhere between $300 and $400 million.

Senator **Bradley**. And, again, do you have any questions about how it would be collected? The waste end tax where the residue is deposited, that is where you will be assessed the tax. Do you have any fear if at the end of the line there is a tax waiting for the person or the company that is going to dispose of the waste, that they have the incentive to dispose of it prior to getting to the end of the line?

Mr. **Forney**. In time, Senator, at the tax level I have described, some people will find ways to recycle that material and to do things with it that we desire, actually have done with it from an environmental standpoint. And I believe that the likelihood is that that tax may collect more in the first year than it would in the fifth year. And in my opinion, that would be the good news for the environment and not bads new at all.

Senator **Bradley**. I tend to agree with that last statement. So if I get your numbers right, you want $1.6 billion from feedstock over a 5-year period, as is presently the case.

Mr. **Forney**. From existing feedstock.

Senator **Bradley**. Existing feedstock. And then you want a roughly $300 million a year from waste end. That's $1.5 and $1.6 billion. That's about $3.1 billion. Now are you suggesting that we get the rest of the money from general funds?

Mr. **Forney**. Senator, I would say there are two sources of getting that. Perhaps three sources. I say again you might very well wish to address the additional list of feedstocks that are in H.R. 5640 not now taxed. General revenue funds are certainly something that I believe your committee should consider very carefully.

I also believe that there is a very large opportunity for cost recovery of Superfund moneys where Superfund has been used to clean up the site and the people who are responsible are then pursued to pay it. I believe that that can easily be brought to the point of easily raising $200 or $300 million a year.

Senator **Bradley**. Do you know how much it has raised in the 4 years that the Superfund has been in operation?

Mr. **Forney**. The Superfund hasn't really progressed far enough through these sites to raise a lot of money of that kind thus far.

Senator **Bradley**. All right.

Mr. **Forney**. One of my main disagreements with Mr. Ruckelshaus and Mr. Thomas and what I think is a very, very excellent job that they are doing this is that I believe actually there will be a much higher proportion of what I call privately financed or privately led cleanups. Their projections have indicated perhaps 40 percent of the sites would be cleaned up without Superfund money. Experience thus far would indicate that it has been well over 50 percent. And I believe that with aggressive action that the likelihood is we may be able to keep that percentage quite high, and thereby reduce the amount of numbers that are needed for Superfund finance cleanup.

Senator **Bradley**. Could I just ask one more question, Mr. Chairman?

The **Chairman**. Sure.

Senator **Bradley**. Does anyone on the panel disagree with what Mr. Forney has said?

The **Chairman**. I think they may disagree on other things.

Dr. **Pirages**. May I comment on other things I might disagree with?

Senator **Bradley**. Sure.

Dr. **Pirages**. I think it's a little misleading to compare the waste end tax with the post-closure liability trust fund as the objective of the two are not the same. A waste end tax is used to raise a specific amount of money annually as a budget item. In other words, you are basing your program budget on that expectation.

The post-closure liability trust fund, however, does not have that. It is a collection over time aimed to reach a particular ceiling which at this point may or may not be an appropriate feeling. But you are not trying to fund a program on an annual basis from the post-closure liability trust fund.

Our concern is that if you have an expectation that annually you will raise $300 million from the waste end tax while you may get it the first year because of the restrictions in the Solid Waste Disposal Act and because of the decreased amount of waste going to land disposal facilities, we believe you won't get that amount the second, third, and fourth year.

How do you manage a program when your funds are being reduced?

Dr. **Alter**. Our members have supported the post-closure liability fund for that purpose. We are disappointed that the House did not agree. Certainly it could be used for the purposes, et cetera, expanded or not, as has been stated. But the fact that it is taken out of the House bill is disturbing.

The other is that our membership has not been able to agree on this waste end or not waste end. The argument within our halls is the same as the argument within these halls. There are so many tradeoffs.

I would suggest, however, that perhaps the lack of disagreement is because we have been talking about this in terms of a very large sum of money. The argument appears to have started in the terms the sums the House has been talking about and even at the suggestion of the Environment and Public Works Committee. And yet the concensus within our membership, and I hope elsewhere, is that that amount is too much. EPA's view is certainly that.

It seems logical, then, that if the argument could be brought down to the smaller amount, I suspect our members might more easily find a concensus on waste end tax.

The **Chairman**. As I understand, everybody here supports extension of the Superfund. Anyone who does not support the extension?

[No response.]

The **Chairman**. Is there any disposition to try to figure out some way to do it this year? And I know what you have said in your statements.

Dr. **Alter**. Excuse me, Mr. Chairman. Do I understand your question right? Do you feel that we should or should not?

The **Chairman**. I just asked if there was any disposition. You have all indicated that—not all of you, but you have and others—you wait until next year because of the expiration data, and there seems to be some logic in that. But is there any disposition to see if we can't forge something. There is going to be a lot of pressure around this place starting about next week to do something.

Mr. **Forney**. The position of the Chemical Manufacturers Association has been that a good bill is more important than the timing of when we get it. Now we recognize, as Mr. Thomas said this morning, that the existing Superfund mandated a study that the EPA has not yet completed, and that, therefore, to a certain extent the Congress is operating without all of the information that they may have available. We have participated in this legislative process extensively through the House and the Senate because we believe that if the matter is being discussed, we want to be there discussing it with the people who are making the decisions.

But as far as we are concerned, the quality of the bill is much more important than the timing.

Dr. **Alter**. Mr. Chairman, if I may echo that and add to it that we note there has been little report in the press, little apparent understanding among public statements of members who are not like yourselves, directly involved, as if reauthorization is needed now because something has to happen today. Whereas as we read the Senate and the House bills—of course, they will take effect only after next year. It's October 1, 1985. So this puts additional questions on why the rush.

I would also point out the history of this bill, of this law; the rush in the 1980 lame duck that many of us remember. And what has happened. We have had controversy. We have had worry. We have had loss of public confidence in the ability of the country to grapple this problem. It seems that another few months is a worthwhile investment.

Senator **Long**. I just want to say, Mr. Chairman, that I notice that the bells have rung while the witnesses were testifying. We are voting in the Senate right now on the nomination of Bruce Bowden to be a District of Columbia judge. Behind that will come another vote back to back on another important bill, a disability insurance bill, which is a $23 billion a year program, and I hope it doesn't become a $100 billion program. Behind that is the measure, for which great pressure is being built to try to rush us to a decision with regard to installing television in the U.S. Senate, which I think will have far more impact than appears on the surface.

The CHAIRMAN. The trade bill.

Senator LONG. Meanwhile, the trade bill is waiting its turn to try to get before the Senate. And each one of us is interested in that trade bill. It's very important to everybody in the entire United States.

I just want to make this point on behalf of the Finance Committee. This committee has exclusive jurisdiction over measures to raise revenue, and no other committee has any jurisdiction over it. To pretend that some other committee has jurisdiction over a $5 billion or $10 billion tax is just wrong. If anybody wants to argue about it, I will debate that question with them until the cows come home. I will tell them before the U.S. Senate. We have that duty. We have that responsibility. And as one who has served on the committee for 30 years, I have had a lot of experience with it.

We have had to convince some people that we had jurisdiction of it. And we have been reasonably successful at it when we had to do it.

Now I just want to do my duty to my country if the good Lord gives me the light to see it. And, I, for one, need more guidance than I have been able to get from the time these witnesses have been testifying. Here is one witness representing all the refiners. I suspect this will put a lot of them out of business. Another witness representing the entire chemical industry. I fear that a lot of them are going to go out of business even if you don't pass the bill—whether you do or don't.

Others are representing the broad flock of all American business through the national Chamber of Commerce. And I say, Mr. Chairman, and members of this committee, I need more advice than I'm able to get from these witnesses and from others in the time we are alloting. Those witnesses are representing goodness knows how many hundreds of thousands of businesses in the country under our procedure—and I'm not criticizing anybody. I have used my power as chairman to slim down some statements too. And I'm just as guilty in abbreviating here as others.

But those witnesses have presented their statements in 15 minutes. Now maybe I'm just slower. I come from Louisiana. I'm a southerner. And maybe I am just slower than some other people. But if I find time to talk to somebody in my office, I never make appointments for less than 15 minutes. It usually takes me that long to hear what the other fellow has to say and react to it at all.

Now I'm going to come back as soon as I can. I hope the witnesses will be available so I can ask some questions. But I would hope that we are not going to try to rush the judgment so fast that we don't know what we are doing, becaus, if we don't know what we are doing, I don't know how the Senate is going to know what it is doing. So I hope we will take time to focus on it.

The CHAIRMAN. That's fine. I don't quarrel with that.

I will say in fairness to the Senate committee, they left a lot of blanks on taxes. They didn't fill in any taxes.

Senator LONG. Well, that was very generous of them.

The CHAIRMAN. They did write a few in like——[Laughter.]

They wrote a tax exemption for animal feed. I assume there are some farm votes at stake there. [Laughter.]

So they stuck in a few provisions, but by and large the Senate Committee on Environment was very circumspect, and they have recognized very clearly that the jurisdiction is in this committee. And I assume we will retain it.

I sort of had the feeling this morning that Senator Bradley was indicating that if it didn't get out of the committee somehow it would show up on the floor. Is that correct?

Senator **Bradley**. Mr. Chairman, I have every confidence that we will be able to move to markup. And I hope you will see us have the markup, and the Senate will have the benefit of our deliberation. And I think that's the best way to go.

I do think that issue is so important to people, though, that they do want to have a chance to look at it before they leave in October.

Senator **Long**. Well, I would hope before we vote on it we will at least have both feet flat on the ground so we will have some indication of where we are when we see the vote on this important measure.

The **Chairman**. I feel that way. I went to Dallas. We had a little meeting down there last month that lasted 2 weeks. But some of the House colleagues on the Republican side are around here screaming "no tax," that voted for this thing over on the House side. You know, $10 billion in new taxes, but they were down there condemning all others on this side. [Laughter.]

Senator **Roth**. Mr. Chairman, I would just like to say that I agree with Senator Long. I think it's critically important that we have the opportunity to hear the pros and cons. For example, some questions that I would like to ask and get some answers to—this morning we had testimony from EPA that they need $5.2 billion plus inflation. And I would like to get the comments of these gentlemen. Second, I would like to have the comments on whether or not we ought to move in the direction of a surtax. Would that be a more equitable, viable means of spreading the cost?

But I do emphasize, as one who strongly supports the continuation of the Superfund and believe that we have to extend or expand the funds, that it is critically important that we don't kill off the industry. I know right now we are trying to save the steel industry. And I can't agree with those who say these measures have no impact, because I think the records show that what we do here is very important. So I would urge that we give these gentlemen full time to explain their point of view.

The **Chairman**. Senator Long is coming back and others of us may come back. But we do have another hearing scheduled, I think, all day on Friday. And there are still other witnesses who are insisting that they should be heard. We don't want to shut anybody off.

Can you all wait for a while? Do you have any planes to catch, or trains to catch, or whatever? But Senator Long will be back, I would say, in about 10 minutes.

Senator **Bradley**. Mr. Chairman, it would be very helpful if each of the witnesses are very specific on how they think the committee should raise the revenue. Very specific because otherwise if we haven't had your views on what you don't want, we might end up with something that you don't like.

The **CHAIRMAN**. Well, there seemed to be a rather large gap there as I added the figures. I don't know where you get the other $2 or $3 billion.

Senator **BRADLEY**. Increased compliance and tapping the underground economy. [Laughter.]

Senator **ROTH**. Mr. Chairman, I have a markup of my Government Affairs Committee at 3:30 so I will be delayed, but I hope to return.

The **CHAIRMAN**. Well, we will see you in a few minutes.

[Whereupon, at 3:15 p.m., the hearing was recessed.]

AFTER RECESS

Senator **ROTH**. The committee will reconvene. I will temporarily take over until the chairman arrives.

Senator Long, would you like to begin the questioning?

Senator **LONG**. Thank you, Mr. Chairman.

Let me first ask Mr. Forney. Mr. Forney, how many chemical manufacturing plants or processing plants are you speaking for before this committee?

Mr. **FORNEY**. The Chemical Manufacturers Association, as an association, represents more than 90 percent of the chemical-production capacity in this country, large and small. I daresay that. The number of plants is several thousand. I will supply that exact number for the record.

[The information from Mr. Forney follows:]

CMA
CHEMICAL MANUFACTURERS ASSOCIATION

February 11, 1985

Mr. Ed Danielson
Senate Finance Committee
231A Hart Senate Office Building
Washington, DC 20510

Dear Mr. Danielson:

I am pleased to provide the following supplementary information to Mr. Forney's testimony on November 16, 1984.

On page 235 of that testimony, Mr. Forney agreed to supply the committee with the number of chemical industry plants. According to the 1982 Census of Manufacturers (the latest government data available), there are 4,756 establishments (plants) with more than 20 employees in SIC 28 (Chemicals and Allied Products). The total number of all establishments (including those with more than 20 employees) is 11,853.

On page 240 of Mr. Forney's testimony, he agreed to provide the committee with statistics on the percentage that petrochemical exports accounted for relative to all chemical exports, and also the trade balance for petrochemicals. Of the 28 four-digit SIC industry numbers of SIC Group 28 (Chemicals and Allied Products), the Department of Commerce defines 8 of those industry numbers as the petrochemical industry (see footnote). Exports for the petrochemical industry as so defined were $9.529 billion in 1983 according to the U.S. Department of Commerce 1984 Industrial Outlook. This figure is 49 percent of the $19.425 billion total exports for SIC 28 as reported by the same publication. Imports for the petrochemical industry for that year were $3.914 billion - giving a positive trade balance of $5.615 billion.

If you have additional questions, please do not hesitate to call me at 887-1130.

Sincerely yours,

K. James O'Connor, Jr.
Legislative Representative
International Trade & Economics

Attachment
cc: Marilyn Mooney - Du Pont

FOOTNOTE

SIC 28	
2821	Plastic materials and resins
2822	Synthetic rubber
2824	Non-cellulosic organic fibers
2843	Surface active agents
2865	Cyclic crudes and intermediates
2869	Basic industrial organic chemicals
2873	Nitrogenous fertilizers
2895	Carbon black

Senator **Long**. And how many companies, how many business entities—corporations, partnerships and individual industries—does that amount to?

Mr. **Forney**. Well, the Chemical Manufacturers Association, as I said, more than 90 percent of the capacity has a membership, I believe, of between 150 and 200 members.

Senator **Long**. And how many employees——

Mr. **Forney**. 180.

Senator **Long**. 180. And how many employees did you say worked for this industry?

Mr. **Forney**. Of the total chemical employment, I will again look for my sources here. The total employment of the chemical industry as represented by the companies in the association is about 1.1 million.

Senator **Long**. One point one million jobs?

Mr. **Forney**. Yes, of which only about 300,000 or 400,000 are involved in primary petrochemicals of the kind that are being specifically taxed in this bill.

Senator **Long**. Well, does this bill pose a threat to the downstream jobs?

Mr. **Forney**. Senator, it does not impose a stress to the downstream jobs. A company that was strictly in downstream chemicals would not be directly taxed and would be in a position to purchase their materials either from abroad or from U.S. producers, and that's very commonly done in our industry. And so except for the fact that the demise or loss of the upstream producers in the United States might pose some eventual danger to the viability of those downstream producers, they would not be immediately economically disadvantaged.

Senator **Long**. Well, I'm concerned about the downstream dumping because of Mexicans providing natural gas oil to chemical companies and certain other companies at a far lesser price than they are willing to sell those raw materials to the United States. Does that pose a problem as far as the downstream processors are concerned?

Mr. **Forney**. Again, initially, Senator, that problem primarily arises upstream with, say, natural gas as it impacts producers of methanol, ammonia, or urea (phonetic). One of the plants that Du Pont announced earlier this month that it would shut down this year is a methanol plant heavily affected by that artificial pricing of natural gas in countries abroad.

But that's an upstream problem. Downstream, the danger does not exist short term. In the longer term, the danger could exist because if you have no viable domestic upstream supplier, on a long-term basis the downstream industries tend to migrate abroad as well.

Senator **Long**. That brings to mind the problem that we are concerned about in Louisiana. The Mexicans provide natural gas for ammonia at a mere fraction of what natural gas costs in the United States. You are familiar with that, are you not?

Mr. **Forney**. I'm very familiar with it, sir.

Senator **Long**. If you are making ammonia in the United States about 85 percent of the cost of the natural gas. The low-cost Mexican natural gas is putting the product at about, let's say, 25 percent of what it is really worth on the world market or what it is worth in the U.S. market.

Mr. **Forney**. Much less than that in many cases.

Senator **Long**. Much less than that in many cases?

Mr. **Forney**. Yes.

Senator **Long**. That puts it in position to sell it so cheaply that there is no way you can compete with that. If you charged zero for your labor and your other expenses here, you still wouldn't be competitive.

Mr. **Forney**. That's exactly right, Senator. True of ammonia, methanol, and urea, the big products that are affected by that. And Du Pont has basically shut down its ammonia plants. And as I said, we are shutting down one of our methanol plants at the end of this year for exactly the reason you state.

Senator **Long**. Now the same thing that is happening with regard to ammonia could happen to ethanol too, could it not?

Mr. **Forney**. Ethanol is derived from ethylene and it will take a somewhat longer period of time.

Senator **Long**. Ethylene. I mean ethylene.

Mr. **Forney**. Ethylene, yes. Ethylene itself is not an easy product to transport interstate, and so what most people do is they go a little bit downstream, as I described in the example I used with you a little bit earlier this afternoon. They would go downstream typically from ethylene to vinyl fluoride monomer or the poly vinyl fluoride or they would go from ethylene to ethylene glycol. Those would be the more likely things to be transported in international commerce.

Senator **Long**. In the last analysis, are you subject to the same threat once they have the money to build the plants? Could they do the same thing to you with those products that they could do with ammonia?

Mr. **Forney**. No question about it, sir.

Senator **Long**. So it could be done. That's a distinct possibility.

Mr. **Forney**. Well, I think it's much more than a possibility. Under the terms that are described here of taxation that are being talked about for the primary feedstocks, it's not only a possibility, but it's a very great likelihood.

Senator **Long**. It's more of a probability than a possibility.

Mr. **Forney**. Yes, sir.

Senator **Long**. Then it is fair to say that unless Congress or the executives see fit to take an attitude more favorable to the U.S. manufacturers of chemicals than they have taken up to this point many of them may well be facing the death penalty already.

Mr. **Forney**. I believe that's very much the case. The primary petrochemical industry is sort of on a survival basis in this country with the existing Superfund tax level. And it's influenced greatly by the kind of artificial pricing of feedstocks that goes into most of these foreign plants.

But our plants here are large. They are efficient. They are modern. We have spent a lot of money over the past several years keeping our plants modern. Speaking for my own company, we spent many, many tens of millions of dollars modernizing our own ethylene facilities to ensure that they can convert feedstock to ethylene at the lowest possible cost. So we are not operating in this country—either in my company or in other companies—on the basis of an inefficient, outmoded industry. We are not bad at all.

And given a reasonable chance to compete, we can compete.

Senator LONG. Does Saudi Arabia and Kuwait have the funds to build plants to compete with what you have here?

Mr. FORNEY. Saudi Arabia has under construction and near completion several petrochemical complexes that will manufacture ethylene and/or their derivatives.

Senator LONG. How about Kuwait? Even if they don't have it, do they have the potential to do it?

Mr. FORNEY. They certainly have the potential to do it, sir.

Senator LONG. Now if money is made available by whatever sources, be it the World Bank, American banks, European banks, Japanese banks, if money is made available, to the Mexicans, Venezuelans, or other oil producing companies, could they construct and operate the same kind of modern plants that are so very competitive under your supervision?

Mr. FORNEY. The Mexicans and the Canadians already have, sir.

Senator LONG. They already have.

Mr. FORNEY. That process is well underway in both Mexico and Canada. And the Venezuelans certainly have the potential to do so although it has not occurred there as yet.

Senator LONG. The thing that troubles me is if we are going to put taxes on your industry or other industries, that that merely amounts to a death sentence. Just put them out of business. Just drive the last nail in their coffins. And it seems to me that we haven't achieved anything. If all you do is overload the camel until you break the camel's back, the camel is not going to deliver anything at the other end.

I think it's only fair for us to take a look and see what is the ability to pay because if you tax to the point where it is no longer economical for a person to compete in your area, I think I know what is going to happen. They are going to go into something else, are they not?

Mr. FORNEY. That is correct, sir. We have said that these primary petrochemicals cannot be taxed above the levels that they are being taxed under the present Superfund. That's at the $300 million level. To go above that, takes an industry that is already sort of tottering and virtually ensures that it will no longer be viable in this country.

Senator LONG. When you talk about imposing the tax on the foreign imports, is it not true that if a company has enough volume of production in their own market or in some market where they do not pay the tax, doesn't that put them in a position that they are in a better position to pay the tax on the excess? For example, if you make a million units of something, and you have got your overhead covered, and you have got your ordinary operating expenses paid, can't yourproduce an extra hundred thousand units very cheaply compared to the first hundred thousand units?

Mr. FORNEY. There's no question about that, sir.

Senator LONG. If that's the case, on the additional units, with a lower unit cost, wouldn't that put foreign firms in a much better position to pay the tax than American firms who are having to pay the tax on all of it?

Mr. FORNEY. That's very true, but I would say again I don't think that's the main danger as far as products coming in here from abroad, Senator. The greater danger is even worse than that. And that is that they will run those facilities full abroad and not worry about paying the tax at all because they will make the next product downstream, or the next one downstream, as in the example that I used earlier, and the products will come in here without any tax on them at all.

Senator LONG. You are saying that, as far as foreign manufacturers are concerned, they can turn their chemical products into either chemicals or even finished products further downstream and put those in in competition with your products where they haven't paid the tax.

Mr. FORNEY. That is correct.

Senator LONG. If you use the illustration I was using where the chemical becomes a pipe or it becomes a garden hose, they are not paying the tax on the garden hose or on the pipe. In that case, those who thought that they were going to put the American in a position to compete by putting a similar burden on the foreigner has simply put him in a position where he is competing for the final customer rather than competing for the intermediary customer.

Mr. FORNEY. That is correct, sir. There is no way that this problem can be solved by putting a tax on primary petrochemicals coming in here or even their first line derivatives.

Senator LONG. In other words, if the foreign producers are competing downstream and you are not taxing them all the way downstream to the point that they will go, then the idea of passing the cost along assumes that you can raise your price further along down the stream.

And if the foreigner is competing with you at that point, and he is not paying the tax, there is no way you can pass it on because at that point he's not paying you. That's what you are talking about.

Mr. FORNEY. You are absolutely correct, sir.

Senator LONG. I'm glad we got that straight because I didn't understand it before this hearing started.

May I say that it's hard to learn all you people know in just 15 minutes. That's all the time we had for all American industry here today to talk about this problem.

Now, Mr. Sternfels, how many refineries are there in the United States?

Senator ROTH. Before we leave, could I just ask a question.

Senator LONG. Go ahead.

Senator ROTH. Isn't it true that today the factors are such that for the typical American chemical company if they are planning a new plant in this area, the factors are such it would be to their interest to go abroad? Is that correct?

Mr. FORNEY. Certainly in the area of primary petrochemicals.

Senator ROTH. That's what I meant.

Mr. FORNEY. For their first or second line derivatives, that would almost certainly be the case. I made a little study here not long ago as to what kind of investments Du Pont was making in its domestic facilities, and since the last Superfund tax was passed. And the amount of money that we have authorized for major chemical facilities since the last Superfund tax was passed for domestic plants is very, very small. It would not constitute one good year in the 1970's or the 1960's. And it has all been exclusively very high tech downstream products. The Kevlars and the Nomexs that I know you are familiar with.

There is no investment at all being made in these upstream products in this country. If you are going to invest in the upstream products, it's going to be done abroad.

Senator ROTH. Isn't it true that there are many factors that make this situation exist today? One of the most important, of course, being the cost of raw materials. In the past, didn't we have an advantage with respect to natural gas and oil in the world competition whereas exactly the opposite exists today?

Mr. FORNEY. Prior to the full deregulation of oil prices in the early years of 1981, there was some slight advantage that U.S. producers had from petroleum based feedstocks as a result of the price controls that we had. That advantage disappeared very quickly when oil was decontroled.

With respect to natural gas, the price controls that we have today continue to give U.S. producers some advantage with respect to people who are paying what might be regarded as world prices. But the competition, as Senator Long indicated, are not those people at all. They are the people in the countries that produce the natural gas themselves, and they use basically artificial pricing to price the material into their ammonia or methanol plants. And it normally goes in there, in many cases, at 25 percent or less of the price that you have to pay in this country today to undertake a natural gas contract.

Senator ROTH. How many employees do we now have in the United States in this petrochemical industry? The primary.

Mr. FORNEY. In the primary petrochemical industry—let me verify that.

[Pause.]

Mr. FORNEY. About 400,000 employees in the primary petrochemical industry.

Senator ROTH. You mentioned the figure 50,000 before. How many of those employees came from the primary petrochemical——

Mr. FORNEY. I doubt we have that figure; 44,000 out of the 50,000.

Senator ROTH. 44,000 lost their jobs.

Mr. FORNEY. Out of the 50,000.

Senator ROTH. Out of the 50,000.

What percentage of your primary product is exported?

Mr. FORNEY. Of the primary products, the ethylenes and the zylenes, I will have to rely on my statistician again.

[Pause.]

Mr. FORNEY. We will submit that one for the record, Senator.

[See page 236.]

Mr. FORNEY. The primary petrochemicals themselves are not a big source of export income.

Senator ROTH. How about one tier or two tier down?

Mr. FORNEY. Pardon?

Senator ROTH. How about one or two tiers down?

Mr. Forney. Those are the big ones. To use the example this morning, the PVC's or the VCM's would be the big export material; not the ethylene.

Senator Roth. Do you have any idea how much the primary petrochemical contributes to our balance of trade?

Mr. Forney. The balance, which is down to $10 billion—the primary petrochemicals are probably still a modest plus.

Senator Roth. I'm sorry. Go down one or two streams further.

Mr. Forney. I will have to submit that one for the record. To go down one or two steps further would probably pick up the biggest portion of that.

[See page 236.]

Senator Roth. So it's a very significant amount?

Mr. Forney. Very significant. It's not easy to transport ethylene. That's not an easy thing to do. And so what you do is you go one or two steps downstream in order to move it in international trade.

Senator Roth. Senator Long.

Senator Long. Let me ask Mr. Sternfels some questions. How many refiners do we have in the United States?

Mr. Sternfels. Senator, that's a very tough question to answer today because a number of those refineries are in existence but they are not operating. They are somewhere in the neighborhood of 240, maybe a few more. But we have seen approximately 100 refineries shut down over the last 3 years. Many of them were small, independent companies or refineries. Some were larger, older refineries of larger companies that have been shut down due to a decline in demand and what I would call a severe economic recession in this industry, which still exists today.

Senator Long. Well, with what is going on in the world, is there a threat to the remaining 240 refineries quite apart from the Superfund?

Mr. Sternfels. My members tell me there is a great threat to the survival of many of their companies. The most vociferous pleas or cries about this problem come from the independent sector of the industry, which right now is suffering from a lack of demand. There has been a general decline in petroleum consumption in this country over the last several years. Competition is extremely tough in the marketplace, and particularly in the gasoline market, which is the largest volume product of most refiners, and generally has been the most profitable.

Part of the problem that these refiners cite as the primary cause of their concern is imports of products from foreign refiners that already are in the U.S. market. There is an estimate that approximately 8 to 10 percent of the gasoline market in the United States today is supplied by foreign refiners. And at a great advantage in terms of cost. That is, the domestic refiners are finding it extremely difficult to meet those costs. Many are operating below levels where they have a profit at all. Some are marginal. A few are making a reasonable return on their investments, but not very many.

Senator Long. Can you just give me some indication as to how the cost of the oil or gas that goes into refinery compares with the price of the product coming out of the refinery gate? In other words, what portion of the cost, other than tax, to a gallon of gas is represented by that which is done inside that refinery.

Mr. **Sternfels**. Senator, I can't supply that number for you now. I would be happy to obtain it.

[The information from Mr. Sternfels follows:]

SUPPLEMENT TO TESTIMONY OF
URVAN R. STERNFELS
BEFORE SENATE FINANCE COMMITTEE (at Page 134)
Sept. 19, 1984

It's impossible to accurately associate refining costs with the price of any specific product, particularly since the prices of the different products obtained from a barrel of crude oil vary so greatly. Total operating costs vary, with some products selling well below the costs of crude oil, while others will sell above raw material costs. Any specific figure results from arbitrarily assigning portions of the total costs to different products, and this practice varies with each refiner.

It has been estimated that the manufacturing costs (i.e., excluding crude costs) in producing gasoline (all types and grades) range from about $.03 to $.10 per gallon. These costs depend on a number of variables. Factors to be considered include gravity and sulphur content of crude being used, relative sophistication of refinery plant equipment, octane quality of gasoline produced, whether the gasoline is leaded or unleaded, as well as other costs of production, such as current wage rates, plant shutdowns, and the debt-equity status of a refinery.

Mr. STERNFELS. One matter that would be helpful, I suspect, that many of my independent refiner friends tell me, is that their profit on a gallon of gasoline obviously varies to some extent with the refinery and the prices that they are able to charge for their crude oil costs. But the profit figure that they make or normally make on a gallon of gasoline may vary from one third to one-half of a cent per gallon.

Now what we are looking at in the House bill that has been sent to you for consideration and on which we are asked to comment today is a tax that essentially would take that entire profit away from those companies. This is in H.R. 5640, the $.091 per barrel tax that would be imposed on petroleum.

Just that tax alone would take away their entire profit. And they obviously have other costs associated with operations in the United States that foreign refiners do not. So they feel quite disadvantaged. And they fear any kind of an increase from the present Superfund tax.

I would like to make a point that I have in my prepared remarks that I did not have time to say earlier. And that is that presently refiners under CERCLA, the present law, are taxed at a rate which accounts for about 15 percent of the funds that were estimated to be collected, the $1.6 billion over the 4½-year period.

Senator LONG. I wish you could give me some indication as to how the price for a barrel of oil relates to the price for a gallon of gas at the refinery gate, leaving out the tax on the gasoline for the consumer because the price of the oil going into it, that would be a very high percentage of the cost coming out.

Mr. STERNFELS. Absolutely.

Senator LONG. You have no idea what that is?

Mr. STERNFELS. I don't have a precise number, no.

Senator LONG. If you have got anybody in the oil and gas business here who knows anything about refineries, he ought to be able to give you that.

Mr. STERNFELS. I think he's working on one back here. He looks like he has got it going.

But generally refineries make a very slim profit on their product.

Senator LONG. Well, the point I have in mind is this: If you are looking at Mexico and you are competing with the Mexican refineries, in Mexico that's a nationalized industry so PMEX would sell the oil to PMEX. And they can set whatever price they want to. They can charge themselves any price they want to charge. It's all inside the family.

It is the same in Saudi Arabia or any petroleum exporting country that wants to put in a refining complex. They can price their energy pretty well the way they want to price it, you would think, in view of the fact that they produce and refine it and it's all inside the same house. They can use their abundant energy to merely subsidize the cost of the final product. It seems to this Senator that whatever price the nonsubsidized producers wants to charge, if you are having to pay the expense of the world market price of energy to get it or to buy it—whatever price you are having to charge yourself, they can price far below that.

Mr. STERNFELS. There's no question about that, Senator. In fact, some companies tell me that at the present time they would prefer to buy product on the market rather than refine it because they can't buy the crude and refine it within their refinery for less than the price that they must pay for the product that is available from overseas in the United States.

Senator LONG. I saw an article or a book that has been written for the people in Saudi Arabia suggesting how they should go about building their petrochemical complex and their refineries. The logic of it was that in view of the fact that they have all that abundant energy in surplus, that they could use their abundant energy in surplus and price it however they please, within certain limits. By subsidizing the price of materials going into their refineries, they could sell it at a price that people over here and other consuming countries simply could not compete with. I'm sure that some of your people have to know about that.

Mr. STERNFELS. I'm confident I can get that information for you, Senator. I would add also that there are a number of costs in addition to the raw-material cost advantage that these countries have. And they basically involve environmental costs, other institutional costs that this country imposes upon all manufacturers, in addition to labor costs, that are far in excess of anything which nondomestic or non-U.S. refiners must pay.

Senator LONG. Part of what I have in mind is that many, many years I have heard well regarded. Senators and Members of the House of Representatives arguing in favor of the principle that you should tax according to the ability to pay. Now if one is to buy that logic, the back side of that same argument is that you should not tax beyond the ability to pay. You shouldn't simply tax them out of business because you are killing the goose that lays the golden egg when you do that.

I really feel that where we are taxing those who have to compete with imports and where they hope to compete on international markets—I really think it's our duty to look at what the competitive position of these American industries is and at least show them the consideration that we are not taxing them out of business.

I believe in the argument of a level playing field. But our tax system puts a tax burden on our producers of about 15 percent in the sense that the others use a value added tax which they rebate, and we don't rebate taxes to our producers. Nor do we have a border tax to pick up the taxes that our people have paid in producing the same product here.

That tax could run as much as 20 percent. But it's rebated to their people on exports, and it is taxed to us in addition to all the taxes we pay here when our products enter their market. To me, that's just like tilting that playing field by about 20 percent. Then you have perhaps another 20 percent, in the difference in the currency exchanges. They call that the strong dollar.

What do you have to offset that? About all you have to offset it is a transportation advantage—ordinarily it costs about 10 percent for freight and insurance to put the product into our market. That looks to me like it's a net tilt of about 30 percent against our industries. It's the same thing as if your favorite college were playing my old alma mater of Louisiana State University, but one side had a tilt of 30 percent in the playing field. I don't think a college team in America, could beat my alma mater if we had the advantage of a 30-percent downhill incline all afternoon. Nor could we beat any good competitive team if the tilt were the other way.

And yet that's what we are doing to American industry on the average right now. Now some would impose this additional tax without carefully considering whether the industry can pay all this, and whether you are in a position to put a similar burden on the competitor. We are looking at plants that are shutting down—you are aware of the fact that we are shutting down quite a few plants along the Mississippi River that are producing chemical products derived from oil and gas?

Mr. STERNFELS. Yes.

Senator LONG. And we have the prospect of shutting down a lot more. You are aware of that?

Mr. STERNFELS. Absolutely. We feel it, too, as an association. We depend upon the dues of those members and we see the diminishment of our membership because of the bad economic times.

Senator LONG. One thing that saddens me about it is that I see companies out there, well regarded American companies who are an asset to our Nation, who just a short time ago were seeking to obtain representation to represent them on the trade problem, who have now gone and made their deals with the Mexicans or others and who now say, forget about that; we will obtain our suppliers elsewhere. We won't produce that product any more. We will just buy it from the Mexicans or someone else.

I see you are nodding. You know that that's a problem, that that's going on.

Mr. STERNFELS. Yes, sir; if I might interject another aspect to this. One of our concerns is that ultimately enough of the U.S. refining industry capacity will be shut down by unfair competition to the point where we will not only be dependent upon foreign sources for our raw materials, crude oil, but we will also be dependent for a substantial portion of our products. And when that point is reached, we will not only be subject to influence, we will be absolutely subject to influence from foreign sources, for a good deal of our Government policy, in our opinion. And it concerns us a great deal.

We are spending very large sums of money to accumulate raw materials to put into the ground in the event that we have a cut off of raw materials. But right now we are doing nothing to really deal with the problem of a growing amount of unfair competition from overseas in this business. And as it grows and puts other U.S. companies out of business, that capacity will not be available in the event that a foreign nation decides that they should cut off our supply of petroleum products which are necessary for many of our needs, including our national defense needs.

Senator LONG. Look at what happened in 1973 and what Ayatollah Khomeini did to us over in Iran just a few years ago. Have you envisioned the situation where we Senators, if we proceed without carefully looking at the consequences, might find ourselves telling our constituents who are standing in line a half a mile long to buy 1 gallon of gas, "Well, you know, it's too bad you can't buy some gas, but I think you would be glad to know we did clean up some dumpsites."

Mr. **Sternfels**. Absolutely.

Senator **Long**. So the dumpsites have been cleaned up, but you can't buy the gas any more.

The point is that it's important that we clean up these dumpsites.

Mr. **Sternfels**. No question.

Senator **Long**. But the taxing part of it could wreak havoc with American industry if we are not careful how we do it.

Mr. **Sternfels**. I quite agree with you, Senator. And as you recall, one of the points in our discussion was urging that you get as many facts, as much information, as you can. And I think the rush to settle this matter before the close of this Congress is a bad way to proceed.

I share your frustrations about not knowing enough—or feeling confident that there is enough information out there to make a good decision. And in this case, that decision is an extremely important one. As you point out, the problem is a significant one. These hazardous sites do pose some dangers. No one contests that. It also poses dangers to impose unjustified taxes on industry and put them out of business so that our economy goes downhill also. I think that is of equal concern to this Congress and certainly to your committee. And I commend you for your concern in that area. And I trust that what you decide on this matter as a committee, as a Congress, I trust and hope that it will accomplish both of those objectives.

Senator **Long**. Mr. Sternfels, you and these other able witnesses here have made some very fine statements and you have forthrightly answered questions. But those in charge of scheduling this matter have been compelled to so compact and abbreviate your statements that it prejudices your case.

I can recall a time when on a matter of this impact, involving $5 or $10 billion of taxes, we would hear not just from the person who spoke for the whole association, we would hear from individual companies, individual witnesses, even people who came from States to testify on behalf of the industry of their States. We would hear them explain their case day in and day out for a month or so before we finally voted on something very important facing them.

Now let me tell you as a Senator that if those of you in the industry keep going into detail to explain your story and explain how it applies to each company, it makes a difference as far as legislators are concerned. You know, we Senators are not all that smart. The first time somebody explains something, we might not get it at all. But about the fourth or fifth time it is explained to you, it begins to get through to you. That really is a problem. If you didn't see it the first time, maybe the second or third time would convince you that that's a real problem.

I regret to say that the compaction that apparently is necessary in these closing days of this Congress does not permit those of you who testify for American business the opportunity to go into detail and present your case so that the people fully understand.

Now, Mr. Alter, you are here testifying for the National Chamber of Commerce.

Dr. **Alter**. Yes, sir.

Senator LONG. You have made a good statement on behalf of the people whom you represent. It's a more lengthy statement. I will find time to read it.

But I hate to tell you how few Senators read all those statements. It's very important that the point of view of all those people you represent be considered. You are here to tell us that you think we ought to at least take the time to focus on this thing, and try to do justice, and see whether it is fairer just to tax those who are accused of creating the problem and look in terms of those who are benefiting from this program, as well as those who are accused of creating it.

Dr. ALTER. Yes, sir; it's all a matter of balance and equity. If I made add on the balance and equity side, it's not only the tax, but it's the whole issue of how serious an environmental problem of the old sites. If we put that in perspective, then perhaps this hearing and the entire issue could be put into somewhat different perspectives.

As you have heard, and as we have heard for months, nobody in the country, I don't believe, thinks that this is a problem to be dismissed. But by the same token, the structure of the law in prioritizing sites, and, indeed, sensible management which prioritizes goals—we all do that every day, I hope—says that we can handle it. Mr. Thomas said this morning that we can handle those of imminent danger to public health and well-being. And why not take our time about sensibly going about remedying those sites that are a problem, but have been in the current state for a long time. They have, fortunately, not been a public menace, a public health threat, for a long time. They are not likely to change overnight. But this rush to create an atmosphere where the public thinks that all these sites are going to be cleaned up overnight or over a year or some other short period of time is deceptive. And being deceptive, it deceives the public as to how much money is needed, how fact, how well it can be spent. And I believe those are the root causes of getting our backs to the wall and talking about heavy and inequitable taxes.

Senator LONG. People think we are going to solve this problem by just throwing billions of dollars at it. They overlook the fact that that seldom works. It usually takes careful administration, careful analysis of one's priorities. If the taxpayers are going to get the value received for their dollar, it really takes timing to plan something and move into it in a carefully organized fashion rather than just jumping in with a huge amount of money.

Dr. ALTER. Yes, indeed.

Senator LONG. When one jumps in with a huge amount of money with that approach, don't you usually lose a lot of money, compared to carefully analyzing what has to be done, putting one's priorities in line and moving methodically from the cases of the greatest need to those of the lesser needs.

Dr. ALTER. Sir, not only do I agree with you, but I will add this as a corollary to this. And that is we just throw the money at it, just tell an agency to suddenly go out and spend a lot of money, then we can foresee that in this body or the body across the street somebody is already planning the investigation and oversight hearing. The scandal breaks out in the paper. TV lights glare. The 7 o'clock news reports that it is not doing well. Then the public loses confidence in our system. It loses confidence in the public sector and the private sector to solve a problem. The opportunity to solve the problem is taken from us.

I think that that loss of public confidence—and especially I think this is true in the Superfund. The great job that Mr. Thomas is doing has been overlooked in the rhetoric. And the loss of public confidence has to be one of the worst things that has resulted from this Superfund.

Senator LONG. Thank you.

Senator ROTH. I would like to make just a couple of comments. First of all, I sympathize in large measure with what the distinguished Senator from Louisiana has said about legislating in a hurry. We saw what happened in the case of our trucking business recently. We spent the next 2 years trying to correct what we did in a hurry.

At the same time, I understand the kind of a situation, for example, that our chairman is in. We do not necessarily control in this committee what will happen on the Senate floor, and I think everybody understands rather well that there will undoubtedly be an effort to add this legislation at some point on Senate proceedings before we recess on October 5.

So I think it is important that we try to develop as quality a legislation as we can. Mr. Thomas has indicated that the Environmental Protection Agency is in a position to spend roughly—I guess, what—a little over $5 billion plus inflation over the next 5 years. And as you have said, Mr. Alter, you have been impressed with the job that he has done to date.

So it does seem to me we are faced with the question: How are you going to raise that revenue? Some of us are concerned that much of the revenue is currently being raised by a small percentage or someone that is only partly responsible for the waste.

Mr. Forney, could I ask you that. What percentage of the Superfund is being paid by the primary petrochemical industry, and what percentage is being paid, I think, by 12 companies?

Mr. FORNEY. The present law requires 87½ percent of the funds to come from the tax on feed stocks, and 12½ percent from general revenues. And of the 87½ percent, some 70 percent was paid last year by 12 companies.

Senator ROTH. What percentage?

Mr. FORNEY. Pardon?

Senator ROTH. What percentage was paid by those 12 companies?

Mr. FORNEY. Seventy percent.

Senator ROTH. Seventy percent. And do you have any figures as to what percentage of the waste was produced by those companies? Are you in the way of making that kind of a guesstimate?

Mr. FORNEY. We have attempted in many ways to make estimates of how much of the waste that was in the site was related to—was put there by the chemical industry itself. And our analysis of this would indicate that somewhere between 40 and 50 percent of the waste in the sites was put there by chemical industry firms. And the remainder by a wide variety of other firms—automobiles, aerospace and airframe, electrical and electronics, primary metals.

All of those companies are involved in it, but the tax is being paid by the chemical industry.

Senator ROTH. So that it is a very heavy burden on the limited number of companies?

Mr. FORNEY. It is, indeed.

Senator ROTH. Now I think we are all in agreement that it's an extraordinarily difficult problem. And that it's one that needs to be financed. I have already mentioned that Mr. Thomas earlier suggested the figure of $5 billion. I think $5.2, plus whatever inflation may be. And there has been some talk about taxing the other end, as to whether or not that is feasible or not. One suggestion has been made that this program should be at least partially financed by perhaps some type of surtax, gross-revenue tax.

Have any of you gentlemen given any consideration to any of these other kinds of taxes to try to spread the burden more equitably?

Mr. FORNEY. The Chemical Manufacturers Association has given consideration to a wide variety of other funding mechanisms and means, including a gross receipts tax, surcharge on corporate income tax and so on, and it is our very firm belief that the funding mechanism described in our written testimony on page 17 represents the best approach to this problem. And I will describe it as a little over $300 million from continuation of the existing feedstocks program—this is annually—a little over $300 million from a waste-end tax, basically a scale up of the existing post-closure tax, $176 million from general revenues, and $210 million from cost recovery, cost recovery and interest on unexpended fund portions.

That adds up to $1 billion, which is consistent with the rate of expenditure that Mr. Thomas has described as practical for the EPA. And it is our recommended plan.

Senator ROTH. So that $170 million comes from general revenue. One of my concerns is if we look at the deficit and look at the inflation factor that Mr. Thomas referred to this morning, we have not covered that. So one of the things I think undoubtedly the committee will be looking at is how to finance that aspect of the program, if we are moving forward.

The hour is growing late, and I won't hold you here since I'm the only Senator, but I think this is a serious question that is going to be raised. Are there other approaches that we might try to raise these funds, if we move before the end of this session, which I don't think anybody knows for certain what will happen at this point.

Gentlemen and ladies, I want to thank you each for being here today. I apologize that——

Mr. FORNEY. Senator, could I respond to one question that you asked that I was not able to produce the numbers for?

Senator ROTH. Sure.

Mr. FORNEY. The petrochemicals and their derivatives, first and second order derivatives, constitute about half of our positive trade balance in the chemical industry today.

Senator ROTH. And the total amount was?

Mr. FORNEY. The total today is between $10½ and $11 billion, down from some $15 billion at the time that Superfund was enacted.

Senator ROTH. So it is a very significant factor?

Mr. **Forney**. Yes, sir.

Senator **Roth**. Again, thank you very much. And we appreciate your patience.

The committee is in recess.

[Whereupon, at 4:58 p.m., the hearing was concluded.]

SUPERFUND ISSUES

FRIDAY, SEPTEMBER 21, 1984

U.S. Senate,
Committee on Finance,
Washington, DC.

The committee met, pursuant to notice, at 10:03 a.m., in room SD-215, Dirksen Senate Office Building, the Honorable Robert J. Dole (chairman) presiding.

Present: Senators Dole, Roth, Danforth, Chafee, Symms, Long, Moynihan, Bradley, and Mitchell.

Also present: Mr. Bruce Thompson, Jr., Assistant Secretary of the Treasury for Legislative Affairs.

[The opening statement of Senator Symms follows:]

Senator Steve Symms—Senate Finance Committee—September 22, 1984

Mr. Chairman, I would again like to restate for the record my strong opposition to the Finance Committee proceeding to mark-up on the Superfund bill before the recess.

Everyone on this Committee knows that this Committee has not had the time nor inclination to properly review the matter before us. In my opinion, it would be irresponsible for us to proceed under the current circumstances.

The reauthorization and funding of Superfund is too serious a matter for us to gloss over lightly in an election year rush to get the bill passed. This measure has serious implications not only because it seeks to solve a serious environmental problem but also because the funding of the program will determine the future financial security of many of our corporations, and the job security of employees in those companies.

Nevertheless, if my views does not prevail, I would suggest that we review the comments and proposals made by the Office of Technology Assessment (OTA) and perhaps, finance a three-year Phase-II Superfund program with a funding level at about $1 billion per year. Within that context, I would suggest that about 50 percent of the $1 billion funding level should come from general revenues because this matter is a societal problem which our society needs to address. The other half of the $1 billion funding level could be obtained from extending the current feedstock tax and implementing the waste-end tax, with an exemption for distressed industries until further studies can be completed to determine the extent to which they are contributing to the toxic waste problem.

During this next three-year period, or the so-called Phase-II, we can review the scope of the problem and determine the best way to fund the solution to that problem.

Before I close my remarks, I would like to mention that I realize that many of the witnesses from the public and private sector were unable to testify because of the time constraints. Consequently, I would like to bring to the attention of the Committee the written testimony that has been submitted by the Dow Chemical Company. Dow started working on the waste-end tax proposal over two years ago, and they have essentially developed the proposal to date. The company has done extensive work in this area and consequently I believe their comments would be particularly interesting for those who might be interested.

The **Chairman**. Now, we will move into the second day of hearing on the Superfund. Our first two witnesses are a panel of A.

Blakeman Early, Washington representative of the Sierra Club, and William Nordhaus, professor of economics, Yale University, New Haven, CT on behalf of Atlantic Richfield Co., Washington, DC.

Let me say to these witnesses and the others—and I think we have too many witnesses today—but in any event, we are going to try to keep the 5-minute rule in effect for members and for witnesses. So, we hope you might summarize your statements and give us some time for questions. Mr. Early?

STATEMENT OF A. BLAKEMAN EARLY, WASHINGTON REPRESENTATIVE, SIERRA CLUB, WASHINGTON, DC

Mr. **Early**. Thank you, Mr. Chairman. My name is Blakeman Early, and I am very pleased to have an opportunity to testify before the committee this morning. Mr. Chairman, I am going to summarize my testimony as best I can. I did bring in this morning a summary of my testimony, which I hope is in front of you now. The Sierra Club and the other organizations on whose behalf I am testifying this morning believe very strongly that a dramatic increase in the Superfund is necessary. The estimates of the number of sites that need to be cleaned up range as high as 7,000 sites. As you may know, estimates even go higher than that on a recent memo by the Office of Technology Assessment and indicates that the long-term problem may be a $100 billion problem involving many more thousands of sites. We believe that the size and the cost of the program has been vastly underestimated by EPA. My testimony goes into considerable detail as to why that is true. We also believe that EPA's cleanup rate has been wholly inadequate. As you probably know, only six sites have been completely cleaned up. A recent survey of 19 States—the cleanup activity in 19 States—indicates that there has been absolutely no activity in 28 percent of the National Priority List sites.

We believe that the feed stock system of raising taxes as found in H.R. 5640 is a reasonable way to increase significantly the trust fund. It appears not to create any major problems in terms of the industry's tax. It is broadened, as you probably know. And we wholly support it. We further believe that the waste-end tax ought to be approached as an experimental tax program if enacted at all, that a waste-end tax cannot be relied on as a principal source of funding the Superfund trust fund. There are just too many unknowns regarding this tax. And finally, in examining some of the other suggestions from the Environment and Public Works Committee, we are ready to support any other system of taxation which is reliable, administerable and fair. But let me point out that we do not believe that shifting a significant portion of the funding to general revenues falls into that category.

The **Chairman**. I agree.

Mr. **Early**. That basically summarizes the most important points of my testimony, Mr. Chairman. Thank you very much.

The **Chairman**. Thank you, Mr. Early. Mr. Nordhaus?

[Mr. Early's prepared written statement follows:]

TESTIMONY OF A. BLAKEMAN EARLY
SIERRA CLUB WASHINGTON REPRESENTATIVE

BEFORE THE
SENATE COMMITTEE ON FINANCE
ON S. 2959 AND S. 2892

ON BEHALF OF

CONGRESS WATCH
U.S. PUBLIC INTEREST RESEARCH GROUP
CLEAN WATER ACTION PROJECT
ENVIRONMENTAL SAFETY
CITIZEN ACTION

September 21, 1984

Mr. Chairman, members of the Committee, I am A. Blakeman Early, Washington Representative for the Sierra Club. The Sierra Club is a nationwide volunteer organization with over 350,000 members dedicated to the protection of our nation's natural resources. Thank you for the opportunity to appear before the Committee to present the views of the Sierra Club on the Superfund Expansion and Protection Act of 1984. I am also testifying on behalf of the following organizations: Congress Watch, U.S. Public Interest Research Group, Clean Water Action Project, Environmental Safety, and Citizen Action.

One of the first questions that members of this Committee must ask about any tax legislation is, "How much money is needed?" We believe that while this question cannot be answered as definitively as the Committee would like, it is not an exaggeration to respond, "More than the Finance Committee can figure out how to raise." When CERCLA was passed in 1980, many in Congress and in the environmental community believed that the size of the fund, $1.6 billion, was very inadequate to solve the problem. The Congress had chosen a level of funding that would take an important first step towards clean-up, while providing better data regarding the size and scope of the problem. Well, we know today that the problem is huge, although the Superfund program has failed to satisfactorily define how large a crisis really exists. Let me explain what we know and then try to outline what we do not know about the Superfund problems nationwide.

THE NUMBER OF SUPERFUND SITES COULD GROW DRAMATICALLY
EPA ESTIMATES ARE LOW

EPA maintains an Emergency and Remedial Response Inventory System (ERRIS) which, quite simply, is a master list of all inactive sites reported from reliable and unreliable sources. There are currently approximately 18,000 sites listed. EPA estimates this inventory will ultimately grow to 22,000 sites. EPA and/or cooperating states are systematically reviewing whatever paperwork exists regarding these sites in a one-week "desk top" study. In some cases, the sites are inspected in order to identify those that actually pose a threat to public health and the environment and prioritize them. About 9,000 sites have been through a paper review (Preliminary Assessment) and 2,200 sites have been inspected. Sites that are inspected are normally subjected to the Hazard Ranking System (HRS) used to assess the severity of an uncontrolled site relative to others. Any site ranking above an arbitrary cut off of 28.5 is normally included on the National Priority List. Sites on the NPL are the only sites eligible for clean-up action and funds under CERCLA.

As you can see, this identification and assessment process is not proceeding very fast. Only 9,000 out of 18,000 sites have been reviewed. A study conducted by the Clean Water Action Project found that, in many cases, sites that have been investigated are not scored for four years (1). Why? Because EPA has absolutely no motivation to add to the growing list of unaddressed sites. EPA has proposed to add 133 more sites to the NPL. In addition, Lee Thomas, Assistant Administrator for Solid Waste and Emergency Response, has already testified that EPA will propose to add 250 additional sites to the NPL. Yet he has also testified that the current Superfund program is only sufficient to clean up 170 sites. Therefore, there is no point, from EPA's viewpoint, in looking for more sites to add to the ERRIS list, or in expeditiously evaluating the hazard potential of those uncontrolled sites already on the list. To make matters worse, it is not clear that the states have much incentive to cooperate with EPA in identifying all uncontrolled hazardous waste sites. Telephone conversations with state officials indicate that at least some states are not reporting all the sites they know about. Indeed, one state official estimated that some 600 sites were on his list that are not on the ERRIS list. Apparently, some state officials believe it is not worth the bother.

Let me assure you, the American people believe that this program should not operate on a "crisis site of the week" basis, allowing these sites to be identified only when they have leaked sufficiently to create a major public health or environmental threat. The American people want an end to this kind of uncertainty. This program must be funded at a high enough level so that EPA has no incentive to avoid finding and assessing additional uncontrolled sites.

Since EPA has delayed the identification and assessment process, we also do not have as accurate an idea of how many sites will actually need clean-up. EPA estimates approximately 1,400 to 2,200 uncontrolled sites will need cleanup. But a survey of state solid waste officials found that over 7,000 uncontrolled sites will need some sort of remedial response. Therefore, we can see that the EPA estimate may well be a conservative one.

MANY NEW SITES MAY BE FOUND

Of course both of these estimates do not take into account the number of additional uncontrolled sites which will be added to the total Superfund cleanup list as a result of currently operating hazardous waste management sites which will close soon and then subsequently leak after the site owner has disappeared. This category of Superfund sites may well be the hidden iceberg in the Superfund crisis. Briefly, EPA and the states are just now taking action to process the more than 5,000 applications for storage, treatment and disposal permits that have been received. As you may know, a hazardous waste management facility in existence at the passage of the Resource Conservation and Recovery Act (RCRA) could continue to operate under "interim status" as long as it applied for a permit and obeyed the interim status regulations which are considerably weaker than the regulations applicable to facilities granted final permits. We believe that many "Mom and Pop" storage and disposal facilities have continued in operation awaiting EPA's request for permit justification data. Then they plan to cease operation. Once these facilities have closed, there is strong question whether the original owners will have sufficient assets to pay for the cleanup of any leaks that may occur. We may well see a substantial addition to the overall list of uncontrolled sites needing Superfund-assisted cleanup from this category of interim sites.

THE HAZARD RANKING SYSTEM UNDERESTIMATES PROBLEM SITES

The last issue to consider regarding the number of uncontrolled hazardous waste sites that may need to be cleaned up is the factors weighed in the EPA Hazard Ranking System and the use of a 28.5 score as the cut-off for NPL consideration. The Mitre Model which is used weighs only the most hazardous substances in the site, rather than considering a composite of all hazardous constituents. In addition, the model weighs more heavily the population density of the area potentially exposed to hazardous substances leaking from the site and not those actually exposed. Therefore, a site located in a rural area might actually be exposing more people but receive a lower score than a comparable site located in a more highly populated area. Also, the Mitre Model used in the ranking does not factor the potential accumulation of toxic substances into food supplies or ecological systems. If, for example, the current score was lowered to 20.0 in order to compensate for these shortcomings in the current ranking system, a study by the Clean Water Action Project found that an additional 100 sites among those EPA has gotten around to scoring would qualify for the NPL and be eligible for funds (2). This is a nearly 20 percent jump in the number of sites eligible for cleanup.

While some members of the Committee may judge that my points regarding the number of sites that need cleanup are only speculation, I respectfully suggest that there is little basis for speculating that the number of these sites is smaller than EPA's conservative estimates.

EPA'S COST PER SITE FOR CLEANUP ARE LOW

Finally, in the assessment of the size of the problem, we come to the question of how much each site to be cleaned up will cost. EPA calculates that federal cleanup at 1,400 to 2,200 NPL sites will cost an estimated $8 to $16 billion. But the high-end cost calculation assumes that 56 percent of the sites will require engineering work to address groundwater contamination, at a cost of only $3.5 million per site. The cost of containing groundwater contamination is likely to range much higher than $3.5 million for the average site. This is a very conservative estimate and explains in part why the General Accounting Office estimates cleanup costs for National Priority List sites could run as high as $26 billion and the Office of Technology Assessment estimated that the cost of cleaning up most of the known sites could be as much as $40 billion.

EPA'S CLEANUP RATE IS INADEQUATE

Let me assure you that EPA's progress even under the rejuvenated effort headed by Lee Thomas is viewed as wholly inadequate among those who are concerned about the threats posed by Superfund sites. A recent review of current progress demonstrates that it will be decades before the known sites are dealt with. Who knows how long it will be before newly identified problem sites are cleaned up? The National Campaign Against Toxic Hazards (3) looked at 343 NPL sites in 19 of the states with the greatest Superfund problems and found:

—96 sites (28 percent) have had no activity undertaken;
—no actual cleanup has begun at 196 of 343 sites;
—cleanups have been completed at only 6 sites.

Looking more generally at the nationwide picture, the NCATH found:

—no actual cleanup has begun at 332 of 538 NPL sites;
—no long-term cleanup funds have been obligated to 9 of the 19 states analyzed;
—no more than 100 sites out of 538 NPL sites can be cleaned up with Superfund money.

The American public has ingrained the "can do" approach which has resulted in such successful programs as our space program. Americans expect this same approach applied to the Superfund program which today is better known for its failures—not its successes. The record of progress I described above simply sends the message to communities at the 332 sites where no action has occurred that they will have to wait many years before the kind of program advocated by the Reagan Administration will provide relief.

The need for a giant increase in the Superfund is clear. We believe that the $10.1 billion provided in H.R. 5640 is in fact the minimum necessary to establish the kind of program that Americans nationwide are demanding. Superfund must have sufficient funds so that the effort to find all uncontrolled sites resumes with vigor and so that we may effectively clean up those that are found. As you know, Senators Bradley and Lautenberg introduced a bill very similar to H.R. 5640, but with $1 billion less in revenue contributed from general revenue. We would recommend that the Committee key the level of feedstock tax to inflation so that the purchasing power of the Superfund is not eroded over the five-year authorization period. This is a change made to H.R. 5640 that distinguishes it from S. 2959. According to preliminary calculations by the Congressional Research Service, this modification to the tax system in S. 2959 would raise an additional $.9 billion over the five-year authorization. This strengthening amendment would help ensure that a good faith effort was being made by Congress to create a Superfund program that could remedy a significant portion of the abandoned dump problem that plagues this nation.

Assistant Administrator Lee Thomas has testified that the current Superfund program cannot productively absorb more than $5 billion over the next five years. Clearly, this is based on an approach that does not envision a major increase in the personnel levels at EPA, or an increased effort to enter into cooperative agreements with State programs. It does not envision a program that would take into account five years worth of inflation; assistance to the states through the payment of a greater portion of operation and maintenance costs, and it clearly does not envision a program that intends to provide any compensation for natural resources damages. And I strongly suspect it does not envision a program which places greater emphasis on providing remedial actions that will provide long-term protection rather than solutions that are cheap in the short-term, but may provide a renewed threat in future decades. We believe that the most concrete way the

Congress can send a signal that the status quo is not sufficient is to dramatically increase the size of the Superfund Trust Fund itself.

SUPERFUND MUST BE ENACTED THIS YEAR

The position of the Reagan Administration is that a reauthorization of Superfund not be enacted this Congress. It argues that since the program is authorized until October, 1985, there is time to take action after more considered deliberation.

As this Committee knows full well, in the next Congress Superfund will have to compete not only with the normal press of legislation, but also with reorganization of the Congress and the legislation associated with the beginning of a new budget cycle. Any increases in the size of the program enacted require lead-time for advance budgeting, and the hiring of additional personnel. Of course, any increases in obligation under a new Superfund authorization would require enactment of a supplemental appropriation. We believe that failure to enact a Superfund reauthorization in this Congress is likely to result in delays in implementing a renewed Superfund program by October, 1985.

THE FEEDSTOCK TAXES ARE REASONABLE

The feedstock tax system in S. 2959 and H.R. 5640 is largely the same as in the current law. We strongly support this system as one which has been an administratively simple and stable source of revenue. In order to help raise the additional funds needed, S. 2959 and H.R. 5640 would broaden the tax base to include 15 additional feedstock substances. All of these substances have been found in numerous Superfund sites or meet the criteria used to select feedstocks under the original law. While S. 2959 and H.R. 5640 increase the rate at which the feedstocks will be taxed, it establishes what appears to us to be a reasonable cap, which is the lower of either three percent of each substance's projected 1986 sales price, or a specified cap. This scheme, which is based on the current law, would appear to ensure that no industry suffers undue hardship as a result of the feedstock tax.

There is little evidence on which to determine what the true impact of a Superfund feedstock tax of the type in S. 2959 and H.R. 5640 will have on the production and sale of petrochemicals. However, two studies indicate that the impact is very modest.

First, a study was sponsored by ARCO (4) of H.R. 5640 before it was amended on the House floor. Although the study was designed to produce dramatically negative results, it found that the feedstock rates--the same as those in S. 2959--would have the following impacts:

--production of propylene, a primary chemical, and polypropylene, a derivative not subject to the tax, would fall only 2%;
--production of benzene would drop by 1%;
--production of styrene, a benzene derivative, would fall 4%.

These findings do not take into account the ameliorative effect of the exemption of exports of primary chemicals from the Superfund tax which was enacted as an amendment to H.R. 5640 on the House floor. We recommend the export exemption as an amendment to S. 2959. Finally, the ARCO study found the impact of the increased tax on sales price for the substances studied to be no more than 2% for the primary chemicals and .5% for the derivatives. The impact of H.R. 5640 on production and sales of these substances would presumably be lower because the rate in H.R. 5640 is lower than in S. 2959.

A second study by the Congressional Research Service (5) looked at the current factors, including Superfund, affecting the petrochemical industry. The study found that the overwhelming factors affecting the prospects for future growth were:

--the economic condition of large end-use domestic markets such as housing and autos;
--the strength of the dollar relative to other currencies;
--the economic condition of key export markets; and,
--the projected expansion of chemical production capacity by hydrocarbon rich foreign countries.

The current Superfund tax was found to be a minor factor relative to those cited above. Notwithstanding the increase in the rate of tax in S. 2959 and H.R. 5640, the 3% cap on percent of sales helps ensure that Superfund will continue to have a minor effect on the petrochemical industry compared to these other factors.

S. 2959 also increases the fee on crude oil used in the production of gasoline and other non-chemical products. The increase in S. 2959 is to 4.5 cents per barrel--H.R. 5640 sets the fee at 7.86 cents per barrel. This fee is not likely to have a major impact on the oil industry which sells a barrel of oil on average for $29 per barrel. Oil corporation profits continue to be enormous.

Now we are certain that many industry representatives will try to persuade you that tremendous hardship will be created by these taxes. Since the Sierra Club has no tax experts on its staff, we can only urge the members of the Committee to consider carefully the revenue consequences of any relief it may choose to grant in reducing the taxes proposed in S. 2959. Frankly, our sympathy for the tax burden currently borne by the chemical and petroleum industries is rather low in view of the tax benefits provided by recent reforms approved by this committee. A study by the Joint Committee on Taxation of the effective tax rates of large U.S. corporations for 1982 found six of the top chemical firms were taxed at a rate of negative 17.7 percent, down from plus 13.7 percent in 1980. By comparison, tax rates on the foreign income of the chemical industry in 1982 was 67 percent. The companies might better take their case for no tax increases abroad. The petroleum industry has enjoyed a drop in tax rate of 13 percent during the same period. Of course, some of this is attributable to the economic recession during which chemical industry profits were low. According to Chemical Week, the chemical industry is now enjoying a tremendous surge in profitability. Looking at the top ten gainers, profits were up during the first quarter of 1984 from a low of 59 percent to a high of 1193 percent over the same period in 1983. And just as we have seen in the auto industry, these corporations have been generous in their expressions of appreciation to their CEOs. According to Chemical Week, salary bonuses have ranged from a low of 15 percent to a high of 76 percent with the President of Hercules Corporation topping the $1 million mark. Surely, times cannot be so tough that these corporations cannot help deal with some of the problems their tremendous success over the past decades has left in its wake?

THE WASTE-END TAX SHOULD REMAIN A MODEST SOURCE OF REVENUE

S. 2959 creates a new tax program that imposes a tax on the disposal of any hazardous substance disposed of pursuant to Subtitle C of RCRA. Long-term storage would also be subject to the tax. This program was developed to provide much-needed revenue for Superfund and to simultaneously create an incentive on the part of waste generators to either recycle or otherwise eliminate the amount of waste of which they dispose. We view the goal as a worthy one, but urge the Committee not to shift any significant revenue-raising responsibility to this program. Quite simply, it is not clear that the waste-end tax program will work. With the need for revenue as desperate as I have described above, it would be ill-advised to rely on what must be described as an experimental program for more than a small percentage of that revenue.

For example, three states, New York, California, and New Hampshire, have attempted to use a waste-end tax. They found that revenues fell significantly below expectations. In fact, New York acquired only one-third of projected revenues. In addition, the waste-end system multiplies astronomically the number of entities that are subject to the tax. One of the beauties of the feedstock system is that the number of taxable entities is far more limited and thus does not force the creation of a large bureaucracy to implement and enforce the provisions. The complexity of administration of a waste-end tax is enormously enhanced by the need to delineate between disposal activities and recycling, and treatments which are not subject to the tax.

The waste-end tax could have two unfortunate impacts which must be assessed before this program could be enlarged. First, to what extent does the imposition of the waste-end tax encourage illegal disposal rather than legitimate forms of waste reduction? Under the current scheme, as long as one avoids taking the waste to a disposal facility, one avoids the tax. Obviously, the promotion of illegal dumping would be counter-productive. Second, the tax is only applicable to wastes which EPA identifies in accordance with RCRA. EPA has been under tremendous pressure to de-list the wastes it has already identified and minimize adding wastes to the hazardous list. This pressure sparked the passage of provisions in S. 757 which the Senate passed late in July to more aggressively list wastes, such as dioxin-contaminated wastes, and to narrow EPA's ability to de-list wastes without public review. An imposition of a waste-end tax just adds a new set of financial stakes to the regulatory stakes regarding whether a waste is listed or de-listed. Thus, the waste-end tax and S. 757 may be working against each other. Clearly, these questions need to be studied in the context of the modest program proposed in S. 2959 before the waste-end tax program is expanded. Indeed, at the recommendation of the Ways and Means Committee, the House adopted a "stand-by" waste-end tax which would go into effect only after more study and legislation had been completed. This decision was a sensible one.

OTHER FORMS OF TAXATION

The report accompanying S. 2892 recently reported by the Environment and Public Works Committee provides suggestions of other types of taxes that could be levied to raise the funds necessary for Superfund. First, let me say that the reporting of S. 2892 provides critically important reauthorization authority and represents a good faith attempt to report a bill in a short time period amidst considerable disagreement over many issues. We believe the bill should be strengthened in order to enhance the Superfund program, and provide those injured or threatened by releases of hazardous substances to seek more effective remedies.

The suggestions which the bill report recommends the Finance Committee to consider as additional tax schemes for funding Superfund include a transportation tax, a tax on imported substances, and a tax on hazardous substance transportation and generation. We have not had an opportunity to study these concepts in any detail. However, we believe that each of these schemes must be looked at from the standpoint of fairness, reliability, administerability and income. Our concerns would be very similar to those I have outlined in greater detail in my comments on the waste-end tax concepts. All of these schemes will provide difficulties in terms of identifying taxpayers and enforcing the tax which would apply to a large number and wide variety of taxpayers. In addition, projecting the income from these tax schemes may be very difficult, except for the hazardous substance generation tax. But let me be clear on one thing: we will support any reasonable tax that will reliably provide the funds needed for this program.

THE COLLECTION CAP SHOULD BE ELIMINATED

Under the current Superfund law, the EPA has allowed a certain level of funds to accumulate during the last two years of the program without spending them; collections under the feedstock program automatically are suspended. S. 2959 would drastically reduce the percentage of unspent funds that could accumulate before the termination of the feedstock fee would be triggered. We are vigorously opposed to this proposal. Currently, more than 95 percent in the next to last year and 50 percent in the last year must be accumulated. The provision in S. 2959 would lower this to 90 percent and 40 percent, respectively. This provision serves only to encourage this Administration to delay spending the funds in order to terminate the feedstock tax as soon as possible. Naturally, every corporation subject to the tax will have the same agenda. This is exactly the opposite incentive we want to provide. We believe that it is crucial to provide as many incentives as possible to aggressively identify uncontrolled hazardous waste sites and clean them up rather than to continue strategies followed during the first three years of this Administration designed to slow the spending of Superfund cleanup money. My earlier testimony regarding the number of sites that will need cleanup provides ample evidence that EPA will need to spend all funds authorized and collected and then some. This provision was devised in 1980 because some Members believed that so few sites would need attention that all the revenues might not be needed. This is clearly no longer the case.

In addition, EPA may well accumulate significant amounts of funds in the first three years under H.R. 5640 and S. 2959 as it does the necessary remedial investigation and feasibility studies prior to construction. It is the construction phase that will draw most heavily on available funds. I would note that completion of the remedial investigation and feasibility studies under the mandatory schedule provided will not occur until three years after passage. Assuming the legislation passes this September, it is not unreasonable to assume that EPA will still have a large percentage of unexpended funds earmarked for construction only a year later when the first revenue collection cap would be triggered. Construction delays could clearly leave EPA with 28 percent of collected funds when the second trigger would apply. The House struck this provision from the law in H.R. 5640; we recommend the Senate do the same.

RECYCLED FEEDSTOCKS SHOULD BE TAXED AT THE SAME RATE AS NEW

As attractive as the recycling concept is, there is one undeniable fact. The recycling of most metals and chemicals is just as dirty and potentially threatening to public health and the environment as virgin production of these products. Indeed, no fewer than 17 abandoned sites are attributable to recycling activities. Therefore, we believe that the recycling industry must bear the same clean-up burden as its virgin counterparts. While is is quite clear that recycling can be part of the hazardous waste solution, it also has and can be part of the problem. The desperate need to maximize income for the Superfund argues against using Superfund tax relief as an opportunity to improve incentives for increased recycling of either chemicals or metals.

THE POST-CLOSURE LIABILITY FUND SHOULD BE ELIMINATED

The Post-Closure Liability Fund (PCLF) was enacted as part of Superfund in 1980 without any serious debate or discussion. The House was forced to accept the Senate provisions as part of a compromise package enacted during the lame-duck session. The original concept was to provide a source of funds for cleanup and damages arising from leaks that occur from sites that have already closed where the owner has disappeared or is insolvent. The PCLF relieves site owners—who may in fact be solvent and available—from liability five years after the site is closed. In the site owner's place is a fund which in all likelihood is far too small to cover all potential liabilities. We believe that those who may be exposed to hazardous substances that have leaked from closed sites many years hence are worse off under the PCLF program than they are under existing law. Here are a few of the flaws in the PCLF program:

1) EPA's regulations are currently inadequate. They provide little assurance that sites will not leak after closure. The transfer of liability from the owner to the PCLF eliminates the best incentive the owner has to manage wastes more safely than EPA requires.

2) It is impossible to determine how many sites will ultimately leak and the amount of cleanup and compensation funds that will be needed. To the extent that the PCLF is under-funded, land disposal, the least desirable option, is subsidized relative to more desirable alternatives.

3) Although all sites will contribute to the PCLF, only those that do not leak within five years of closure can transfer liability. Those that do leak within five years and do not qualify to use the PCLF have had needed funds diverted to sites which may not pose problems for many years. Where do the victims of these sites turn?

4) States will be delegated supervision of closure operations. Yet these states will bear no responsibility for letting an inadequate site transfer liability to the PCLF. Indeed, they may have an incentive to transfer liability for as many sites as possible to avoid paying for future cleanups out of state funds.

The PCLF program is fatally flawed. We urge the Committee to let it die. Currently operating sites will not qualify for some time, because EPA has issued few final permits. If tne Committee feels compelled to revisit the issue in tne future, it could do so without the burden of an existing "lame duck" program.

This concludes my testimony. Again, I appreciate the opportunity to present tne views of the Sierra Club to the Committee.

FOOTNOTES

(1) Too Few, Too Slow, A Report on the Environmental Protection Agency's Assessment of Hazardous Waste Sites for Inclusion in the Superfund program, June 6, 1984.

(2) Id, Exhibit B.

(3) An Assessment of Cleanup Progress at Superfund Sites, National Campaign Against Toxic Hazards, September, 1984.

(4) Financing Superfund: An Analysis of CERCLA Taxes and Alternative Revenue Approaches, William D. Nordhaus and Management Analysis Center, Inc., June, 1984.

(5) U.S. Primary Petrochemicals: The Superfund Taxes and Other Factors Shaping Recent Trends in Supply and Demand, Congressional Research Service, July 30, 1984.

TABLE 1

EXHIBIT B

The following list contains sites which rank below the arbitrary cut-off point of 28.5 on the Hazard Ranking Score(HRS). The HRS is the method used to determine whether or not an uncontrolled hazardous waste site is eligible for inclusion on the National Priority List (NPL). The sites on the NPL are eligible for cleanup funds under Superfund.

Site Name	City	Hazard Ranking Score
ALABAMA:		
Callahan Property	Prattville	22.0
ARKANSAS:		
Midland Products Co	Ola	21.9
CALIFORNIA:		
Apache Service LF	Chula Vista	26.0
General Disp Co	Santa Fe Springs	26.2
General Electric Co	Oakland	21.1
Kellogg Terrace	Yorba Linda	23.4
Masonite Mill-Mescat Field Site	Hoopa Vly Ind Res	20.9
Valley Wood Preserving Inc	Turlock	25.0
Westinghouse-Sunnyvale	Sunnyvale	28.3
COLORADO:		
Gateway Vanadium Mill	Gateway	27.8
Hendricks Mining & Milling	Boulder	27.8
Koppers Co Inc	Denver	25.0
Loma Vanadium Mill	Loma	26.6
CONNECTICUT:		
Coastal Tank Lines	Wallingford	23.8
South Windham Landfill	South Windham	24.9

FLORIDA:		
Nocatee Hull Creosote	Nocatee	20.0
HAWAII:		
Wheeler Air Force Base	Honolulu Oahu	20.2
IDAHO:		
FMC Corp-Pocatello	Pocatello	22.7
ILLINOIS:		
A & F Materials Co	Olney	24.6
Carpentersville Waste Site	Carpentersville	27.0
Koppers Co Inc Forest Prod Grp	Carbondale	25.5
Martin Peoria Term	Peoria	20.7
Ottawa/Luminous Processes	Ottawa	20.7
Taylorville Landfill	Taylorville	21.2
Thomas 12th St Landfill	Danville	23.6
INDIANA:		
Du Pont E I De Nemours & Co	E Chicago	20.8
Energy Cooperative Inc	E Chicago	22.8
Levin & Sons	Fort Wayne	23.3
Midco II	Gary	23.6
Neals Dump	Spencer	26.8
Vulcan Materials Co	Gary	20.0
IOWA:		
Midwest Manufacturing Co	Kellogg	20.6
KANSAS:		
Derby Refining Co	Wichita	27.4
KENTUCKY:		
Harrison Cnty Site	Cynthiana	24.3

Foxey Flats	Hillsboro	20.8
MAINE:		
Green Street Site	Houlton	22.0
Mechanic St Site	Houlton	22.0
Saco Municipal Landfill	Saco	24.4
MARYLAND:		
Joy Reclamation Co	Glen Burnie	25.5
Montgomery Bros	Northeast	21.2
MASSACUSETTS:		
Holden Dump	Holden	24.3
Schpack Dump	Norton	28.1
MICHIGAN:		
Bachman Road Residential Wells	Oscoda	22.4
Barrels Inc	Lansing	22.6
Charlevoix Chem Manuf Co	Charlevoix	25.1
Darling Road Dump Site	Milan	21.8
Dowagiac Landfill	Dowagiac	26.5
Hartley & Hartley	Kawkawlin	20.1
Harvey Residential Wells	Harvey	23.9
Kalkaska Residential Wells	Kalkaska	26.1
Lyon Twp Dump	Lyon Twp	23.4
Martinsville Road Disp Site .	Waltz	27.9
Norris Ind	Ypsilanti	20.1
Page Avenue Dump	Michigan Center	27.7
Straits Steel & Wire Co.	Ludington	26.1
Sunrise Landfill	Wayland Twp	23.0
Systech Liquid Trmt Corp	Muskegon Hts	24.8

Village of Atlanta Wells	Atlanta	23.0
MISSOURI:		
Amoco Oil Co	Sugar Creek	28.0
Baldwin Park Dump	Aurora	22.5
Bubbling Springs Arena	Fenton	24.1
Erwin Farm	Verona	22.0
Farmer's Chemical Co	Joplin	25.0
St. Joseph City LF-Pigeon Hill	St Joseph	23.7
Wheeling Disposal Service Co Inc	Amazonia	25.0
NEW HAMPSHIRE:		
Brugnale Waste Disp Site	Milford	22.5
Milford Municipal Landfill	Milford	29.9
NEW JERSEY:		
Barrier Chemical	Vernon	26.7
Duck Island Sanitary Landfill	Hamilton Twp	27.1
Ideal Cooperage Inc	Jersey City	25.0
Mile Marker 28	Manchester	25.0
White Chemical Corp.	Bayonne	24.7
NEW YORK:		
Clothier Site	Granby	26.3
Edward Allen Landfill	Corning	28.3
Pfhol Bros Landfill	Cheektowaga	24.9
NORTH CAROLINA:		
Duke Refining Corp	High Point	29.0
H & S Processors Inc	Lincolnton	28.4
OHIO:		
Anaconda Ave George Off Site	Akron	23.9
Armentrout Excavating	Xenia	22.9

D & E Incorporated Landfill	Wayne Twp Crclvl	28.0
Eastham Residence/Contaminated Wls	Rayland	25.9
Ford Rd Ind Landfill	Elyria	26.7
Goodrich B F Co Chem Grp	Avon Lake	22.2
Grenier's Lagoons	Freemont	26.5
Norris Landfill	Zanesville	25.1
Republic Steel Central Alloy	Canton	27.7
PENNSYLVANIA:		
Cryo-Chem Inc	Boyertown	25.0
Kurtz Property	Narvon	25.0
Mayer Landfill	Springfield Pk	24.6
Mock Dump (Concord Twp LF)	Elam	21.2
Revere Chemical Corp	Nockamixon	24.9
Saegertown Well #2	Saegertown	23.0
Turco Coatings	Phoenixville	28.3
RHODE ISLAND:		
Hunt P A Chemical Corp	Lincoln	23.0
Sillvestri Bros Landfill	Johnston	23.7
W Davis Sanitary Landfill	Glocester	23.1
TENNESSEE:		
Newport Dump	Newport	26.4
Saad John P & Son Inc	Nashville	21.1
TEXAS:		
Moore Drum Site	Wilmer	23.3
UTAH:		
House in Monticello	Monticello	25.0
Store in Monticello	Monticello	22.0
WASHINGTON:		

Silver Mountain Mine	Loomis	26.6
WEST VIRGINIA:		
Holder Chem Corp	Ona	26.1
Markay Chemicals	St Albans	20.1
Smith Creek Dump	S Charleston	26.8
WISCONSIN:		
Hagen Farm	Stoughton	22.5
Hydrite Chem Corp	Cottage Grove	23.2
Mauthe N W Co	Appleton	21.2
Saukville Well Field	Saukville	23.0

APPENDIX II

196 SITES AT WHICH ACTUAL CLEANUP HAS NOT BEGUN

Site Name	City
CALIFORNIA	
Atlas Asbestos Mine	Fresno County
Coalinga Asbestos Mine	Coalinga
Del Norte County Pesticide Storage	Crescent City
Iron Mountain Mine	Redding
Jibbom Junkyard	Sacramento
Koppers Co., Inc.	Oroville
McColl	Fullerton
Purity Oil Sales, Inc.	Malaga
Selma Treating Corp.	Selma
CONNECTICUT	
Beacon Heights LF	Beacon Falls
Old Southington Landfill	Southington
Solvents Recovery of New England	Southington
Yaworski Waste Lagoon	Canterbury
FLORIDA	
62nd St. Dump	Tampa
Alpha Chemical Corp.	Galloway
Brown-Wood Pres.	Live Oak
Cabot/Koppers	Gainesville
Coleman-Evans Wood Preserving	Whitehouse
Davie Landfill	Davie
Hollingsworth solderness Terminal	Ft. Lauderdale
Kassauf-Kimerling Battery Disposal	Tampa
Munisport Landfill	North Miami
Northwest 58th St. LF	Hialeah
Picketville Road LF	Jacksonville
Pioneer Sand Co.	Warrington
Schulykill Metals Corp.	Plant City
Varsol Spill	Miami
ILLINOIS	
Acme Solvent Reclaiming	Morristown
Belvidere Municipal LF	Belvidere
Cross Bros. Pail Rcyc.	Pembroke Township
Johns-Manville Corp.	Waukegan
Outboard Marine Corp.	Waukegan
Wauconda Sand & Gravel	Wauconda
INDIANA	
American Chemical Service	Griffith
Lake Sandy Jo	Gary
Main Street Well FD	Elkhart
Marion (Bragg) Dump	Marion
Northside Sanitary LF	Zionsville
Reilly Tar & Chemical Cp.	Indianapolis
Wayne Waste Oil	Columbia City

IOWA	
Des Moines TCE	Des Moines
MAINE	
F. O'Connor	Aigista
Saco Tannery Waste Pits	Saco
Winthrop Landfill	Winthrop
MASSACHUSETTS	
Hoconomco Pond	Westborough
Iron Horse Park	Billerica
New Bedford	New Bedford
Nyanza Chemical Waste Dump	Ashland
Plymouth Harbor/Canon Engineering	Plymouth
Re-Solve, Inc.	Dartmouth
W. R. Grace & Co., Inc.	Acton
Wells G & H	Woburn
MINNESOTA	
Arrowhead Refinery Co.	Hermantown
Boise Cascade/Onan/Medtronics	Fridley
Burlington Northern	Brainerd/Baxter
General Mills/Henkel Corp.	Minneapolis
Joslyn Manufacturing & Supply Co.	Brooklyn Center
Morris Arsenic Dump	Morris
NL Industries/Tarcorp/Golden Auto	St. Louis Park
Nutting Truck & Caster Co.	Fairbault
Perham Arsenic	Perham
South Andover	Andover
St. Louis River	St. Louis County
St. Regis Paper	Cass Lake
Waste Disposal Engin.	Andover
Whittaker Corp.	Minneapolis
NEW HAMPSHIRE	
Auburn Road LF	Londonderry
Dover Municipal LF	Dover
Savage Municiapl Water	Milford
Somersworth Sanitary LF	Somersworth
South Municipal Water	Petersborough
NEW JERSEY	
A.O. Polymer	Sparta Township
Beachwood/Berkley	Berkley Township
Bog Creek Farm	Howell Township
Brick Township LF	Brick
Chemical Leaman Tank Liners	Bridgeport
Chemsol, Inc.	Piscataway
Combe Fill North LF	Mt. Olive Township
Combe Fill South LF	Chester Township
De Rewal Chemical Co.	Kingwood Township
Delilah Road	Egg Harbor Township
Denzer & Schafer X-Ray	Bayville
Diamond Alkali Co.	Newark
Evor Phillips Leasing	Old Bridge Township

Ewan Property	Shamong Property
Fair Lawn Well Field	Fair Lawn
Florence Land Recontouring	Florence Township
Friedman Property	Upper Freehold Township
Helen Kramer LF	Mantua Township
Hercules, Inc.	Gibbstown
Hopkins Farm	Plumstead Township
Imperial Oil/Champion Chemicals	Morganville
JIS Landfill	Jamesburg/S. Brunswick Twnshi
Jackson Township LF	Jackson Township
King of Prussia	Winslow Township
Krysowaty Farm	Hillsoborough
Lang Property	Pemberton Township
Lone Pine Landfill	Freehold Township
M & T Delisa Landfill	Asbury Park
Manheim Avenue Dump	Galloway Township
Maywood Chemical Co.	Maywood/Rochelle Park
Metaltec/Aerosystems	Franklin Borough
Montgomery Township Housing Dev.	Montgomery Township
NL Industries	Pedricktown
Nascolite Corp.	Miliville
PJP Lanfill	Jersey City
Pepe Field	Boonton
Pijak Farm	Plumstead Township
Radiation Technology	Rockaway Township
Reich Farms	Pleasant Plains
Ringwood Mines/LF	Ringwood Borough
Roebling Steel Co.	Florence
Sayreville Landfill	Sayreville
Scientific Chemical Process.	Carlstadt
Sharkey Landfill	Parsippany/Troy Hills
Shieldalloy Corp.	Newfield Borough
Spence Farm	Plumstead Township
Swope Oil & Chem.	Pennsauken
Toms River Chemical	Toms River
US Radium Products	Orange
Universal Oil Products	Est Rutherford
Upper Deerfield Township Sanitary L	Upper Deerfield Township
Ventron/Velsicol	Wood-Ridge Borough
Vineland Chemical Co.	Vineland
Vineland State School	Vineland
Williams Property	Swainton
Wilson Farm	Plumstead Township
Woodland Route 532 Dump	Woodland Township
Woodland Route 72 Dump	Woodland Township
NEW YORK	
American Thermostat	South Cairo
Batavia Landfill	Batavia
Brewster Well Field	Putnam County.
Facet Enterprises	Elmira
Fulton Terminals	Fulton
GE Moreau	South Glen Falls
General Motors/Central Foundry Division	
Hooker (102nd Street)	Niagara Falls
Hudson River PCBs	Hudson River

Kentucky Ave. Well Field	Horseheads
Ludlow Sand & Gravel	Clayville
Marathon Battery Corp.	Cold Springs
Mercury Refining	Colonie
Niagara County Refuse	Wheatfield
Old Bethpage Landfill	Oyster Bay
Port Washington LF	Port Washington
Ramapo Landfill	Ramapo
Sinclair Refinery	Wellsville
Solvent Savers	Lincklaen
Syosset Landfill	Oyster Bay
Vestol Water Supply #1	Vestol
Vestol Water Supply #2	Vestol
Wide Beach Development	Brant
NORTH CAROLINA	
Chemtronics, Inc.	Swannanoa
OHIO	
Allied Chemical & Ironton Coke	Ironton
Arcanum Iron & Metal	Darke County
Big D Campground	Kingsville
Bowers Landfill	Circleville
Buckeye Reclamation	St. Clairsville
Coshocton LF	Franklin Township
E.H. Schilling LF	Hamilton Township
Fields Brook	Ashtabula
Fultz Landfill	Jackson Township
Miami County Incinerator	Troy
New Lyme Landfill	New Lyme
Powell Road Landfill	Dayton
Skinner Landfill	West Chester
South Point Plant	South Point
United Scrap Lead Co., Inc.	Troy
OREGON	
Teledyne Wah Chang	Albany
United Chrome Products, Inc.	Corvallis
PENNSYLVANIA	
Blosenski Landfill	West Caln Township
Centre County Kepone	State College Borough
Craig Farm Drum	Parker
Dorney Road Landfill	Upper Macungie Township
East Mount Zion	Springettsbury Township
Heleva Landfill	N. Whitehall Township
Industrial Lane	Williams Twonship
Kimberton	Kimberton Borough
Lackawanna Refuse	Old Forge Borough
Moyers Landfill	Eagleville
Old City of York LF	Seven Valleys
Taylor Borough Dump	Taylor Borough
Voortman Farm	Upper Saucon Township
Walsh Landfill	Honeybrook Township
RHODE ISLAND	

Davis Liquid Waste	Smithfield
Landfill & Resource Recovery	North Smithfield
Peterson-Puritan, Inc.	Lincoln/Cumberland
Western Sand & Gravel	Burrillville
VERMONT	
Old Springfield LF	Springfield
Pine Street Canal	Burlington
WASHINGTON	
Colbert LF	Colbert
FMC Corp. (Yakima)	Takima
Frontier Hard Chrome	Vancouver
Greenacres Landfill	Spokane LF
Harbor Island (Lead)	Seattle
Pesticide Lab	Yakima
Queen City Farms	Maple Valley

M·A·C Management Analysis Center, Inc.

FINANCING SUPERFUND: AN ANALYSIS OF CERCLA TAXES AND ALTERNATIVE REVENUE APPROACHES

Final Report For
The Atlantic Richfield Company

by

Dr. William D. Nordhaus
and
Management Analysis Center, Inc.

June 1984

EXHIBIT C.4

OUTPUT OF THE PETROCHEMICAL TRADE MODEL

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                       PETROCHEMICAL TRADE MODEL

**************************************************************************

                                 PROPYLENE                  POLYPROPYLENE

                              U. S.    Rest of W.          U. S.    Rest of W.
                            -------------------------   -------------------------
EXISTING TAX RATE           *            |             **             |             *
                            *            |             **             |             *
    Tax Rate                *      $4.87 |          $0 **          $0 |          $0 *
    Price                   *       $494 |        $503 **        $803 |        $862 *
                            *            |             **             |             *
    Production              *       5788 |       10280 **        1577 |        3021 *
    Imports                 *            |             **           3 |         367 *
    Exports                 *            |             **         367 |           3 *
                            *     ------ |      ------ **      ------ |      ------ *
    Consumption             *       5788 |       10280 **        1213 |        3385 *
                            *            |             **             |             *
    Sales (net)             *     $2,828 |             **      $1,267 |             *
    Tax Revenue             *        $31 |             **          $0 |             *
                            *            |             **             |             *
NEW TAX RATE                *            |             **             |             *
                            *            |             **             |             *
    Tax Rate                *     $13.82 |          $0 **          $0 |          $0 *
    Price                   *       $499 |        $504 **        $807 |        $863 *
                            *            |             **             |             *
    Production              *       5652 |       10395 **        1540 |        3054 *
    Imports                 *            |             **          15 |         344 *
    Exports                 *            |             **         344 |          15 *
                            *     -+---- |      ------ **      ------ |      ------ *
    Consumption             *       5652 |       10395 **        1211 |        3383 *
                            *            |             **             |             *
    Sales (net)             *     $2,734 |             **      $1,244 |             *
    Tax Revenue             *        $86 |             **          $0 |             *
                            *            |             **             |             *
PERCENTAGE CHANGES          *            |             **             |             *
                            *            |             **             |             *
    Price                   *          1%|        0.2% **         0.5%|         0.2%*
                            *            |             **             |             *
    Production              *         -2%|          1% **          -2%|           1%*
    Imports                 *            |             **         421%|          -6%*
    Exports                 *            |             **          -6%|         421%*
    Consumption             *         -2%|          1% **        -0.2%|        -0.1%*
                            *            |             **             |             *
SALES DECREASE              *        $95 |             **         $23 |             *
TAX REV INCREASE            *        $55 |             **          $0 |             *
                            -------------------------   -------------------------
**************************************************************************
Note:  Quantities are in thousands of metric tons (2204.6 lbs), and
prices are in dollars per metric ton.  Tax rates are entered in dollars
per English ton (2000 lbs.) and converted to dollars per metric ton
for use in the model.  Sales and tax revenues are in millions of dollars.
**************************************************************************
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This table shows the effects of the tax rate proposed by H.R. 5640 ($13.82) on production, imports, and exports of propylene and polypropylene, compared with the existing tax rate.

EXHIBIT C.4 (CONT.)
OUTPUT OF THE PETROCHEMICAL TRADE MODEL

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                        PETROCHEMICAL TRADE MODEL

***********************************************************************

                               BENZENE                      STYRENE

                         U. S.    Rest of W.          U. S.    Rest of W.
                    _________________________   _________________________
EXISTING TAX RATE  *            |            **            |            *
                   *            |            **            |            *
    Tax Rate       *      $4.87 |         $0 **         $0 |         $0 *
    Price          *       $460 |       $460 **       $648 |       $716 *
                   *            |            **            |            *
    Production     *       3571 |      11445 **       2893 |       4884 *
    Imports        *        448 |         28 **         12 |        465 *
    Exports        *         28 |        448 **        465 |         12 *
                   *      ----- |      ----- **      ----- |      ----- *
    Consumption    *       3991 |      11025 **       2440 |       5337 *
                   *            |            **            |            *
    Sales (net)    *     $1.624 |            **     $1.873 |            *
    Tax Revenue    *        $19 |            **         $0 |            *
                   *            |            **            |            *
NEW TAX RATE       *            |            **            |            *
                   *            |            **            |            *
    Tax rate       *     $14.88 |         $0 **         $0 |         $0 *
    Price          *       $469 |       $461 **       $657 |       $717 *
                   *            |            **            |            *
    Production     *       3518 |      11561 **       2790 |       4975 *
    Imports        *        351 |         20 **         54 |        413 *
    Exports        *         20 |        351 **        413 |         54 *
                   *      ----- |      ----- **      ----- |      ----- *
    Consumption    *       3849 |      11230 **       2430 |       5335 *
                   *            |            **            |            *
    Sales (net)    *     $1,592 |            **     $1.832 |            *
    Tax Revenue    *        $58 |            **         $0 |            *
                   *            |            **            |            *
PERCENTAGE CHANGES *            |            **            |            *
                   *            |            **            |            *
    Price          *          2%|       0.2% **          1%|        0.1%*
                   *            |            **            |            *
    Production     *         -1%|         1% **         -4%|          2%*
    Imports        *        -22%|       -27% **       347%|        -11%*
    Exports        *        -27%|       -22% **        -11%|        347%*
    Consumption    *         -4%|         2% **       -0.4%|      -0.04%*
                   *            |            **            |            *
SALES DECREASE     *        $32 |            **        $41 |            *
TAX REV INCREASE   *        $39 |            **         $0 |            *
                    _________________________   _________________________
***********************************************************************
Note:  Quantities are in thousands of metric tons (2204.6 lbs), and
prices are in dollars per metric ton.  Tax rates are entered in dollars
per Englsih ton (2000 lbs.) and converted tu dollars per metric ton
for use in the model.  Sales and tax revenues are in millions of dollars.
***********************************************************************
```

This table shows the effects of the tax rate proposed by H.R. 5640 ($14.88) on production, imports, and exports of benzene and styrene, compared with the existing tax rate.

STATEMENT OF WILLIAM NORDHAUS, PH.D., PROFESSOR OF ECONOMICS, YALE UNIVERSITY, NEW HAVEN, CT, ON BEHALF OF THE ATLANTIC RICHFIELD CO., WASHINGTON, DC

Mr. NORDHAUS. Did you say we were in a 1-minute rule or a 5-minute rule?

The CHAIRMAN. Five, but if you can do it in one, that is great. [Laughter.]

Mr. NORDHAUS. All right.

The CHAIRMAN. We don't have any problem, but if you can summarize then we can have a little time for questions and other witnesses.

Mr. NORDHAUS. All right. Thank you very much, Mr. Chairman. My name is William Nordhaus, and I am a professor at Yale University. I was a member of the Council of Economic Advisers from 1977 to 1979, and in that capacity I supervised the Council's activities on energy, environmental affairs, and regulation. My testimony today is based on a thorough study that I completed on the impacts of Superfund financing and various financing alternatives. That study I would like to submit for the record.

The CHAIRMAN. It will not be made part of the record. It would break the committee if we reprinted all that.

Mr. NORDHAUS. I would like to submit it for your consideration. It was sponsored by the Atlantic Richfield Co., but its conclusions are mine.

There is a broad consensus today that cleaning up dump sites is high on the Nation's agenda, but the question we are addressing today is who shall pay. Our study looks into eight major revenue alternatives: three broad-based taxes, two intermediate-product taxes, and three waste-end taxes. We followed the congressional criteria outlined in the 1980 committee reports in examining these revenue alternatives.

What I would like to do is to talk about three of them very briefly and then conclude my testimony. The first of these are the feedstock taxes which have formed the bulk of the revenues for the Superfund cleanup. On a first and superficial reading, these appear to be a reasonable approach, but a careful study has convinced us that this tax is poorly designed and quite pernicious in its effect, with significant impacts on efficiency and international trade. Let me just say a word about the trade impacts because I don't know if these are well understood. These taxes—the chemical taxes—are in effect a subsidy on imports of the chemicals and the petrochemical derivatives and a tax on U.S. exports of these substances. An increase in taxes will hurt U.S. production, will cause U.S. exports to decline, and imports to increase.

We have attempted to estimate the impact of the larger taxes in a petrochemical trade model. We think that at five times the current tax rates, for taxes on the order of $25 a ton, the imports of the major products will rise several hundred percent from a very small base, and the exports of the products will fall in the range of 10 to 25 percent. The long-run effects may be even greater.

We examined some alternatives, and let me briefly mention those. One was a corporate receipts tax which is a tax on corporations' net receipts, and this tax scores well on all the major criteria. The others are some waste-end taxes. We devoted a great deal of time to designing a hazardous waste disposal tax which we would like to submit for your consideration. Our view is that this tax is indeed one that is feasible to administration. It is, in fact, one that is now being administered by a number of States and could form, along with a corporate receipts tax, a secure and adequate revenue base.

To summarize, first, the current feedstock taxes are exceedingly poorly designed as a mechanism for financing hazardous waste cleanup. In fact, they are hazardous of the health of the chemical and petrochemical industries. Second, our analysis finds that raising the chemical feedstock taxes would lead to a marked deterioration in the competitiveness of these industries with a dramatic rise in imports and sharp loss of exports. Third, the best revenue alternatives are general revenues, a corporate receipts tax, and a waste disposal tax. Thank you.

The CHAIRMAN. Perfect.

(Mr. Nordhaus' prepared written statement and a letter from Atlantic Richfield Co. follows:]

DR. WILLIAM D. NORDHAUS

TESTIMONY BEFORE THE
SENATE FINANCE COMMITTEE
SEPTEMBER 21, 1984

My name is William D. Nordhaus. I am a professor of economics at Yale University where I hold the John Musser chair in Economics. From 1977 to 1979 I was a member of the Council of Economic Advisers and in that capacity I supervised the Council's activities in energy, environmental affairs, and regulation. I am the author of numerous books and articles on economics, energy, regulation and finance.

My testimony today is based on a thorough study that I recently completed on the impacts of Superfund (CERCLA) feedstock taxes and the advantages and disadvantages of various financing alternatives. This study, which I will submit for the record, was performed in conjunction with the staff of Management Analysis Center, a faculty-based management consulting firm. The sponsor of the study was the Atlantic Richfield Company, but its conclusions are mine alone.

Financing Superfund

There is a broad consensus today that cleaning up dumpsites filled with hazardous wastes is high on the nation's environmental agenda. The major public policy issue addressed today is, Who shall pay?

Our study looked into all the major revenue alternatives, including some novel suggestions. In the end, we analyzed eight:

I. Broad-based taxes

- . Corporation income tax
- . Corporate receipts tax
- . Personal income tax (general revenues)

II. Intermediate-product taxes

- . Energy taxes
- . Feedstock taxes (such as in CERCLA)

III. Waste-end taxes

- . Hazardous substances production tax
- . Hazardous waste generation tax
- . Hazardous waste disposal tax

We examined each of the eight alternatives in light of established public-finance criteria. A full decision is contained in our final report, and I will but summarize the major conclusions in this overview.

Criteria for Financing Superfund

The Superfund trust fund currently being discussed will be far larger than the program enacted in 1980. Therefore I think it is appropriate to be clear about the criteria for selecting a financing method. In analyzing these taxes, I have followed the four criteria selected by Congress in 1980.

. Revenue adequacy
. Administrative simplicity
. Equity
. Economic efficiency

Let me address briefly the last two criteria because they are less self-evident than others.

Equity, or fairness, is highly subjective. When the parties legally responsible for disposing of hazards are known, it is held that they be liable for cleanup. In deciding upon how to pay for cleanup where responsibility is unknown, four groups can be singled out because they benefit from the activities in some way: (1) producers who enjoyed lower costs, (2) disposers of hazardous waste who benefited from lower standards and, hence, lower costs for disposal, (3) consumers who benefited from lower prices, and (4) individuals who live in the vicinity of hazardous waste sites and would suffer if cleanup were not undertaken. The past benefits of the products that have caused hazardous waste problems, and of today's cleanup, are widely dispersed. To properly apportion cost to all groups, everyone who has ever used a styrofoam cup, bought pantyhose, taken aspirin, or wrapped a sandwich in plastic wrap would have to be taxed.

Economic efficiency, as applied to these taxes, consists of two goals: (a) providing incentives for the appropriate disposal of wastes, and (b) raising revenues in a way that minimizes economic distortions. Attainment of goal (a) suggests that the taxes should fall on those substances that impose risks on the public, and not on nonhazardous substances or substances that are detoxified, neutralized, or recycled (and hence, are not hazardous wastes). Goal (b) is attained by choosing taxes that minimize economic dislocations, i.e., do not distort the allocation of resources (except to internalize costs). In this area the most significant issue to weigh is possible distortions of international trade.

Analysis of Major Alternatives

1. CERCLA feedstock taxes

The first revenue source that we examined carefully was the current and proposed CERCLA chemical feedstock taxes. On a first and superficial reading, these appear to be a reasonable approach. However, a more careful study convinced us that this tax is a poorly designed and pernicious tax, with significant impacts on efficiency and international trade.

Let me begin by analyzing the trade impacts. It is not widely understood that the CERCLA taxes are in effect a subsidy on imports of petrochemical derivatives and a tax on U.S. exports of primary and derivative petrochemicals. An increase in taxes on U.S. production of petrochemicals will cause U.S. exports to decline and imports to increase by reducing the cost advantage of U.S. production relative to foreign production. We developed a petrochemical trade model that shows how CERCLA taxes affect the U.S. imports and exports of both primary petrochemicals and their principal derivatives.

We ran the model for two sets of primary and derivative petrochemicals -- propylene/polypropylene and benzene/styrene -- using three alternative tax rates which were approximately $14 per ton, $24 per ton, and $49 per ton. The $24 figure represents a five-fold increase in the CERCLA tax rates now in effect. We have not had time to rerun the model using the tax rates in H.R.5640 as passed by the House. However, the taxes on propylene and benzene, adjusted for inflation and the increases if a waste-end tax is not enacted, will be up in the $24, or five-fold increase, range.

Our results indicate that the trade impacts on petrochemical derivatives will be substantial. For example, at the $24 tax rate exports of polypropylene and styrene will fall 13% and 20% respectively. Imports of each will rise 900% and 600% respectively. These changes in the trade balance will cause production losses in the short term. As plant replacement and technological innovation make new petrochemical capacity economically attractive, CERCLA taxes could well tip the decision to build new capacity outside our borders.

Some might claim that CERCLA feedstock taxes are effective as an externality tax, by which I mean a tax that relates to the hazard posed by the chemical. With a separate economic model we examined the incidence of CERCLA taxes in the production of petrochemical products. We analyzed the effects of a tax levied on the feedstock propylene, compared to a tax that is levied on a downstream hazardous product. The results show that feedstock taxes are too indiscriminate to be effective externality taxes. The burden of the tax on feedstocks falls on derivatives that are both nonhazardous substances, such as aspirin, as well as hazardous substances, such as carbolic acid!

2. Corporate receipts tax

The corporate net receipts tax, which we have called the

"Business Environmental Fee", is a tax on all corporations' net receipts--their gross receipts minus cost of goods sold. It is a secure source of revenues. It is easy to administer because it is based on existing tax forms and records. It can be viewed as fair because of the widespread source of hazardous waste. The problems associated with toxic waste sites were caused by the actions of a wide number of companies in many industries, so it is reasonable that the burden of cleaning up waste sites also be broadly based. Finally, a tax on corporate new receipts does not introduce any major distortions into the economic allocation of resources. Its effect on foreign trade is inconsequential.

3. Hazardous waste disposal tax

The hazardous waste disposal tax is an attractive option because it is close to the source of the problem and may help internalize associated social costs. The waste-end tax will be levied on the disposal of hazardous wastes as defined in the RCRA regulations. The tax should be incurred at the time when hazardous waste is disposed of onsite, stored onsite for more than a year, or received at an offsite facility for either storage or disposal. The structure of the tax is discussed in some detail in our report; indeed, we feel that our proposal is the most carefully designed of the many proposals extant.

A combination of a corporate receipts tax and hazardous waste disposal tax both promotes safer disposal technologies and secures sufficient revenues for waste site cleanup.

To generate $1.3 billion per billion--$1 billion from the Business Environmental Fee and $300 million from the waste-end tax--the following tax rates are needed. For the Business Environmental Fee companies would pay a rate of .09% (or $9.00 per $10,000 in net receipts) on net receipts in excess of $5 million. The tax would be paid by approximately 46,000 companies, out of the 3.5 million that are expected to file corporate tax returns in 1985. More than half the tax would be paid by the manufacturing sector.

The waste disposal tax can readily raise another $300 million per year. Based on EPA (Westat Study) data, we estimate that the taxes will be paid by approximately 5,000 establishments that dispose of hazardous waste.

CONCLUSIONS

I will now briefly summarize the conclusions of our report.

1. The current CERCLA feedstock taxes are extremely poorly designed as a mechanism for financing hazardous-waste cleanup. They are hazardous to the health of the petrochemical industry. They suffer from one of the major defects of public finance in that they are intermediate product taxes in an industry

that is heavily exposed to international trade. They should be replaced by other revenues sources.

2. Our analysis finds that raising the chemical feedstock taxes would lead to a marked deterioration in the competitiveness of the domestic petrochemical industry, with a dramatic rise in imports and sharp losses of exports. This committee, which is uniquely poised to balance both revenue needs and foreign trade impacts, should consider the possibility that a rise in chemical feedstock taxes today will lead in the future to a petition from chemical manufacturers for protection from foreign competition.

3. The best revenue alternatives are general revenues, a corporate receipts tax, and a waste disposal tax. Any of these would induce very low levels of economic inefficiency; they would not distort international trade; and, in my view, they would spread the burden of cleanup costs widely and fairly across the community.

4. A final possible revenue source is a tax on hydrocarbons. While this tax is an intermediate product tax, studies show that its distortions are relatively small. It would also, in my view, be an acceptable revenue source for financing Superfund.

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William T. Christian
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September 24, 1984

The Honorable Robert Dole
Chairman, Committee on Finance
United States Senate
Washington, DC 20510

Dear Senator Dole:

Atlantic Richfield Company's consultant, Professor William Nordhaus, testified before the Senate Finance Committee on September 21st on CERCLA taxation. He expressed an opinion that the Senate Finance Committee should finish action this year on CERCLA. In so responding, Professor Nordhaus was expressing his individual views. Atlantic Richfield Company does not agree that CERCLA should be reauthorized this year, and we have so testified on a number of prior occasions. Absent the completion of Congressionally mandated studies, especially on taxation alternatives, to act this year would be premature.

We wish to thank you for the opportunity to have Professor Nordhaus appear. In the event the Committee does mark up legislation this year, we hope that you will give the taxation options advanced by Atlantic Richfield and Dr. Nordhaus full consideration.

Very truly yours,

William Christian
William T. Christian

WTC/bjp

bcc: L. R. Mecham
H. H. Paige

Rod DeArment
Michael Stern

Chuck Sandler, API
Bill Stover, CMA

The CHAIRMAN. Senator Moynihan?

Senator MOYNIHAN. I have two questions. Both are very distinguished witnesses and have spoken to the question of a waste disposal or waste-end tax. I have put a bill in on this subject. I see that the Sierra Club says that a waste-end tax should remain a modest source of revenue, and Professor Nordhaus thinks it is an efficient tax. We don't think of it as raising anything like the larger portion of these revenues. We have talked about pollution taxes a great deal and never really imposed any. But as an economic principle, a waste-end tax gets closest to imposing a cost on the persons who have previously imposed a cost on us. Isn't that substantially the case?

Mr. EARLY. Senator, in my view, the waste-end tax is one of those concepts that makes a great deal of sense conceptually, but is very, very difficult to work out administrably.

Senator MOYNIHAN. We found that out in New York, as you recognize, but it is not impossible.

Mr. EARLY. The question is in the situation. It is quite frankly our group's feeling that the primary consideration has to be raising revenue. The biggest problem with the Superfund Program right now is a lack of funding, a lack of adequate funding anywhere near the size of the problem. And as long as the waste-end tax remains a very small—and when I say small, I mean in the $1 billion range—it is useful to produce a program that is in the nature of an experiment to see if it raises the money and to see if it is administerable. What we are concerned about is along the lines of what Mr. Nordhaus has suggested, and that is shifting a very large portion of the revenue raising burden on a waste-end tax, which we view as highly experimental. The other consideration is that you have to make right now is that one of the biggest problems with regulating active hazardous waste management facilities is the EPA decision as to what to list and delist as a hazardous waste. There is enough pressure on EPA as it is making that regulatory decision. You raise the stakes that much more if, as a result of that, they are also subjected to a significant——

Senator MOYNIHAN. A fair point. Mr. Nordhaus?

Mr. NORDHAUS. Senator Moynihan, we studied the experience of a number of States rather carefully, including New York and California, and I might summarize briefly our findings. First, there is no doubt that the waste-end taxes can work. They are now working in 21 States.

Senator MOYNIHAN. Twenty-one States? Two-one?

Mr. NORDHAUS. Yes. And I think the view of many environmentalists that these are dangerous to the Superfund is simply an outmoded idea. It might have been the case in 1980, but it is not the case in 1984 for these programs are actually working. If you would like to look into this more carefully, the California program is probably the model. It is the one we used and looked at most carefully in designing our waste-end tax.

Second, there is no doubt that you cannot raise all the revenues of the Superfund Program from the waste-end tax. We estimated that the Nation—on the Federal level—could raise $300 million with a modest waste-end tax. Third, I think the most important point is that unlike the other taxes which we levy, these are taxes which will increase economic efficiency rather than hurt it. They are true supply side taxes.

Senator **Moynihan**. If you tax——

Mr. **Nordhaus**. May I just finish that point? The point is that they are a tax on the hazard imposed on society by penalizing improper hazardous disposal.

Senator **Moynihan**. And the presumption is that if you tax it, you get less of it?

Mr. **Nordhaus**. Not only that you get less of it, but that people are given incentives to dispose of their wastes in a proper way such as incineration, recycling, or treatment. So, in that respect, I think it is an efficiency promoting tax and one that would be a useful additive to our tax system.

Senator **Moynihan**. Thank you very much.

The **Chairman**. Senator Bradley?

Senator **Bradley**. Thank you very much, Mr. Chairman. Mr. Early, your testimony hit on two questions: How much money and from what sources the money will come. In answering the questions, shouldn't we really consider the size of the job that the Superfund has to do? How likely is it that the Superfund will cleanup all the dumps with $5 to $10 billion? Won't we be back reauthorizing the program in 5 more years?

Mr. **Early**. There is little doubt in my mind that we will be reauthorizing the program in 5 years. From our standpoint, the major issue is are we going to create a program that at least takes a good crack at cleaning up the most obvious of the dump sites, rather than bumping along at what we consider to be a wholly inadequate pace. The testimony of the administration indicates that they are not interested in building a bigger Superfund Program. They are interested in a very slow but steady cleanup rate. We are calling for a different kind of program of massive increase in the size of the program, in recognition of the massive increase in the size of the problem as we understand it today, as compared to 4 years ago.

Senator **Bradley**. We had a witness Wednesday from the Chemical Manufacturers Association who maintained that one of the things that we should do is to assume that we are going to get more money from the private owners and getting them to pay for the cleanup. Do you have any sense as to how much money we could reasonably expect to get from these collections on an annual basis?

Mr. **Early**. I do not have such an estimate. The experience to date, as you probably know, has been that almost negligible amounts of money have been obtained. Prosecuting those responsible for creating Superfund sites is very, very difficult and complicated. There is one interesting dynamic with regard to the ability to go after responsible parties and the size of the fund. The fact of the matter is that if EPA has a large amount of money which puts it in a position of being able to clean up first and sue the responsible parties afterward, it actually improves their leverage to go after responsible parties before they have to clean up because they know that the EPA threat of cleaning up and suing afterward is not a hollow threat. Today, because there is so little money in the fund, it is in fact a hollow threat and so the responsible parties are not motivated to come forward at an early time in the process.

Senator **Bradley**. Bill Nordhaus, do you agree, and what do you think we could expect in revenues from this program of going after the private sector to make them pay for the costs of cleanup? I think that the number that the CMA made was something like $200 million annually.

Mr. **Nordhaus**. I think we have not recovered very much so far, and it is a costly and long-term project to go after these old dumpers. I guess my response would be that you should look at what a reasonable amount of funds would be needed for the next 3, 4, or 5 years and project that. I don't buy either the strategy theories that say if you have $20 billion there, you are going to beat them over the head, or that you are going to raise a lot more revenues. Really, I think we will probably go along pretty much the way we have over the last 4 years.

Senator **Bradley**. And so, you think we can do something less than $20 billion but certainly more than $1.6? Should we split the difference?

Mr. **Nordhaus**. No. Let me say that there is a problem here, that the expenditures have been falling way behind the receipts. I don't think that one should simply assume that the EPA is acting in bad faith. There are some very, very difficult questions with the long-term remedials. The technology is being just learned about now.

If I might use the analogy of the nuclear power program, I would hate to go into this with all engines at full speed and find we have made some serious mistakes in our remedials. There is still some learning to do. I am not saying we should go slowly, but I don't think we are wise to force the remedials at a faster pace than current knowledge allows, and there is still a fair amount of uncertainty about the best way to design long-term disposal.

Senator **Bradley**. What is the effective tax rate now in the chemical industry?

Mr. **Nordhaus**. It varies. It is on the order of 1 percent or a little less.

Senator **Bradley**. One percent?

Mr. **Nordhaus**. I'm sorry. Which tax are you talking about—the corporate income tax rate?

Senator **Bradley**. Or the effective income tax rate.

Mr. **Nordhaus**. I don't know.

The **Chairman**. It was a minus in 1982.

Senator **Bradley**. A minus?

Mr. **Nordhaus**. Yes, I think so.

Senator **Bradley**. Could I ask one more question, Mr. Chairman?

The **Chairman**. Yes.

Senator **Bradley**. In your testimony, you talked about the danger of the feedstock tax and the competitive disadvantage that it would place many of our industry members in. In the Joint Tax Committee's analysis of the Superfund, they referred to this issue in the following way, and I quote:

> While some segments of the chemistry are highly competitive, the recent growth in the petrochemical imports appears to be attributable largely to the appreciation of the dollar against foreign currencies and competition from plants established near low-cost sources of natural gas in the Middle East and elsewhere.

So, how do you balance what is the cause—the appreciation of the dollar, which went even higher today in the world markets and which appears to be headed even higher, thereby making these exports less and less competitive and imports more and more competitive in this country, or the low cost to the producer elsewhere?

Mr. NORDHAUS. Up to now, there is little doubt that the major factor both in this industry and in other industries has been the role of the dollar. What we have addressed is the issue of the potential impacts on the petrochemical industry of a significant increase in the feedstock taxes. If I could just give you a small example——

The CHAIRMAN. Do it quickly if you can.

Mr. NORDHAUS. It was supposed to be very quickly. Our comparative advantage in petrochemicals is in the order of a penny a pound, or on the order of about $20 a ton, vis-a-vis Western Europe. We have slightly larger plants here, and that is basically the source of our advantage. As the taxes rise toward the $20-a-ton range, basically what we are doing is to lose our comparative advantage through domestic taxation. This will mainly affect investment and will affect where plants are located in the longer run. But I would expect that as you get up above that $20-a-ton range, you will find this country losing its comparative advantage in this area.

The CHAIRMAN. Senator Chafee?

Senator CHAFEE. No questions, Mr. Chairman.

The CHAIRMAN. Let me say that obviously we have some questions, but we also have 13 additional witnesses and we can't spend all of our time on the first 2 or 3. Then the ones that are at the bottom never have any time. Just as one member of this committee, we understand the need to extend the program, but I think we also understand the need to make certain we do it in the correct way. The Senate bill was introduced in July. The House bill in May. We are being asked in 1 week to throw something together and get it out on the Senate floor. We have 10 legislative days between now and adjournment. I am not certain we are going to be able to do that or what we are going to be able to do. We are going to make an effort. We have a working group looking at different options. So, I would suggest that I think we understand many of the concerns that are going to be raised by other witnesses. Our big concern is can we do something this year, or should we do something this year? The Sierra Club, I know, would like the extension to come. Did you give a view on that, Mr. Nordhaus?

Mr. NORDHAUS. Mr. Chairman, to put things in the broader perspective, I think you ought to get it out of the way this year. You have a lot of things you are going to be handling next year, and when all is said and done, this is a relatively small program compared to the deficit reduction program you will be handling next year. So, I think you ought to try to get it out of the way this year.

Senator BRADLEY. Do you agree with that, Mr. Chairman?

The CHAIRMAN. You know, we have got a lot of things we are trying to get out of the way, including increasing the debt ceiling. We finished the trade bill. I am also involved in Grove City and a few other little items. Plus, I have got a feeling that some of those revenue bills we are sending to the House are going to attract a lot of flies over here. So, we will have a lot of action between now and October 5. We thank you very much for coming.

Mr. **Nordhaus**. Thank you very much, Mr. Chairman.

The **Chairman**. Our next panel is Lewis Freeman, director of Federal Government affairs, the Society of the Plastics Industry; Joseph W. O'Toole, vice president and general tax officer of Phillips Petroleum; Edward G. Taylor, president, Daniel Battery Manufacturing Co., Baton Rouge, and president of the Battery Council International, Washington, accompanied by Jonathon Plaut; and Christian A. Hansen, Jr., president of LCP Chemical & Plastics, Inc., Edison, NJ, on behalf of the Chlorine Institute in Washington, DC.

Unless you have some order, we will just do it in the way it is on the agenda. Is that all right, Mr. Freeman? Let me again indicate that your entire statements will be made a part of the record.

STATEMENT OF LEWIS R. FREEMAN, JR., DIRECTOR, FEDERAL GOVERNMENT AFFAIRS, THE SOCIETY OF THE PLASTICS INDUSTRY, INC., WASHINGTON, DC.

Mr. **Freeman**. Good morning. My name is Lewis R. Freeman, Jr. I am director of Federal Government affairs of the Society for the Plastics Industry. We are the principal trade association of companies that make plastics resin, make machinery and molds to process finished products and the processors of those products. Our interest in the Superfund bill stems from the fact that plastics are made from petrochemical feed stock derivatives. Hence, our interest. We support reauthorization of Superfund and we do so recognizing that a larger fund than the present fund is needed. We are concerned, though, about two aspects. One, we are concerned that the fund might be made larger than can be efficiently spent in whatever the authorization time is. Hence, more taxes would be raised than are required, and since we are an industry that would be taxed directly or indirectly, we are concerned about that. Second, we are concerned about how the additional revenue would be raised; 4 years ago we testified before this committee. It was not me. It was a director of our association, Gene Branscomb, president of the Gott Corp. of your State—Winfield, KS. At that time, you were looking at the Superfund bill which was in question which was about a $4 billion bill, and Mr. Branscomb pointed out to the committee that this would have estimated raised his cost of high-density polyethylene, which he made insulating containers from, by perhaps as much as 2 percent of his cost of raw materials. Now, we are looking—if we look at the House bill—at an amount that would be certainly greater than that, and that concerns us, and it particularly concerns us because of the point made by the previous witness. In the 4 years since Mr. Branscomb testified, we have found our plastics processors faced with increasing amounts of imports.

There is a small amount of exporting done, but principally, they are concerned about imports. In a study I did last year, it showed that in selected plastic products, the imports had tripled from 1978 to 1982. I don't know what the new figures are, but I am sure that trend has continued. Our concern is that if whatever increased Superfund you enact is principally going to rely on the additional money on feed stock tax, you are putting plastics processors and others who are downstream from the chemical companies at an even greater disadvantage than they may already be from other factors, such as the value of the dollar, et cetera. Because of that, we would urge that you look at alternative methods of financing additional Superfund funds, such as the waste-end tax, and we would certainly be happy to answer questions later on. I hope I got within the 5 minutes for you.

The CHAIRMAN. Thank you. Mr. O'Toole.

[Mr. Freeman's prepared written statement follows:]

**The Society of the
Plastics Industry, Inc.**

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STATEMENT OF

LEWIS R. FREEMAN, JR.
DIRECTOR, FEDERAL GOVERNMENT AFFAIRS

THE SOCIETY OF THE PLASTICS INDUSTRY, INC.

BEFORE THE

FINANCE COMMITTEE
UNITED STATES SENATE

ON

THE REAUTHORIZATION OF
THE COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION AND LIABILITY ACT

FRIDAY, SEPTEMBER 21, 1984

GOOD MORNING. I AM LEWIS R. FREEMAN, JR., DIRECTOR OF FEDERAL GOVERNMENT AFFAIRS OF THE SOCIETY OF THE PLASTICS INDUSTRY, INC. (SPI). SPI IS THE PRINCIPAL TRADE ASSOCIATION FOR THIS NATION'S PLASTICS INDUSTRY, WHICH HAS GROSS SHIPMENTS OF OVER $80 BILLION AND OVER 20,000 ESTABLISHMENTS LOCATED THROUGHOUT THE U.S. SPI REPRESENTS MORE THAN 1600 MEMBER FIRMS, INCLUDING MANUFACTURERS OF RAW MATERIALS DERIVED FROM PETROCHEMICAL FEEDSTOCKS (RESINS), MACHINERY AND MOLDS USED TO MAKE FINISHED PRODUCTS, AND THE PRODUCERS AND DISTRIBUTORS OF THOSE FINISHED PRODUCTS. WE APPRECIATE THE OPPORTUNITY TO PRESENT TO THE SENATE FINANCE COMMITTEE OUR VIEWS CONCERNING THE REAUTHORIZATION OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT OF 1980. MY COMMENTS WILL FOCUS UPON TWO AREAS OF CONCERN TO OUR INDUSTRY: THE SIZE OF THE PROPOSED REAUTHORIZATION AND THE BASIS OF TAXES TO SUPPORT THE FUND.

THE SPI FULLY SUPPORTS THE REAUTHORIZATION OF SUPERFUND SO THAT HAZARDOUS WASTE SITES CAN BE CLEANED UP RAPIDLY AND EFFECTIVELY. WE ALSO AGREE THAT THERE IS A NEED TO INCREASE THE SIZE OF THE FUND FROM THE LEVELS CURRENTLY AUTHORIZED. HOWEVER, THE INCREASE THAT WAS APPROVED BY THE HOUSE OF REPRESENTATIVES IN HR 5640, FROM $1.75 BILLION TO $10.2 BILLION OVER 5 YEARS, REFLECTS AN INCREASE THAT FAR EXCEEDS THE FUNDING LEVELS THAT COULD BE EFFICIENTLY UTILIZED TO

ACHIEVE THE GOALS OF THE SUPERFUND PROGRAM. SPI BELIEVES THE SIZE OF THE FUND SHOULD BE REASONABLE AND WITHIN THE BOUNDS THE ENVIRONMENTAL PROTECTION AGENCY (EPA) CAN EFFECTIVELY UTILIZE IN CLEANING THE HAZARDOUS WASTE SITES. WHILE THE HAZARDOUS WASTE CLEAN-UP PROBLEM IS CRITICAL, UTILIZING THE "MORE IS BETTER" THEORY FOR LEVEL OF FUNDING WILL NOT ASSURE AN EFFICIENT PROGRAM.

IN ADDITION TO THE SIZE OF THE FUND, SPI IS CONCERNED ABOUT THE TAXING MECHANISM THAT MAY BE USED TO EXPAND THE SUPERFUND PROGRAM. WE BELIEVE THERE IS A NEED TO BROADEN THE REVENUE BASE FROM THE CURRENT TAX ON PETROLEUM AND PETROCHEMICAL FEEDSTOCKS AND TRANSFER MORE OF THE TAX BURDEN TO THOSE WHO DIRECTLY CONTRIBUTE TO THE HAZARDOUS WASTE PROBLEM.

SPI'S MEMBERSHIP INCLUDES THOSE COMPANIES THAT MANUFACTURE PLASTIC RESINS FROM PETROCHEMICAL FEEDSTOCKS. BUT, MORE THAN HALF OF OUR MEMBERS ARE SMALL BUSINESSES THAT PROCESS PLASTIC PRODUCTS. THESE PROCESSORS ARE MAJOR USERS OF RESINS THAT ARE DERIVATIVES OF ALMOST ALL OF THE PETROCHEMICAL FEEDSTOCKS TAXED UNDER THE PRESENT SUPERFUND LAW. BECAUSE OF THE PLASTICS INDUSTRY'S HEAVY DEPENDENCE UPON PETROCHEMICAL FEEDSTOCKS FOR RAW MATERIAL, ANY PROPOSAL OR ACTION THAT WOULD AFFECT THEIR PRICE MUST BE SERIOUSLY EXAMINED.

FOUR YEARS AGO THIS MONTH, OUR ASSOCIATION TESTIFIED BEFORE THIS COMMITTEE ON THE THEN-PROPOSED S. 1480, THE ENVIRONMENTAL EMERGENCY RESPONSE ACT. OUR WITNESS WAS GENE BRANSCUM, PRESIDENT OF THE GOTT CORPORATION OF WINFIELD, KANSAS, A MANUFACTURER OF INSULATED CONTAINERS. HE TESTIFIED THAT THE $4 BILLION FUND CALLED FOR AT THAT TIME WOULD RESULT IN A SIGNIFICANT INCREASE IN THE COST OF HIS PRINCIPAL RAW MATERIAL, HIGH-DENSITY POLYETHYLENE. BRANSCUM ESTIMATED AT THAT TIME THAT THE INCREASE WOULD RESULT IN A 2 PERCENT INCREASE IN THE COST OF HIS RAW MATERIALS. NOW, WITH A MUCH LARGER SUPERFUND AND A PROPOSED INCREASED TAX ON ETHYLENE THAT IS OVER FOUR TIMES THAT CONSIDERED IN S. 1480, THE CONCERN OF PLASTICS PROCESSORS HAS GROWN.

PROPOSALS SUCH AS HR 5640 WOULD RESULT IN AN INCREASE OF APPROXIMATELY A PENNY PER POUND FOR ALL POLYMERS, INCLUDING LOW COST, HIGH VOLUME COMMODITY RESINS SUCH AS POLYETHYLENE, POLYSTYRENE, PVC AND POLYPROPYLENE. THE OVERALL AVERAGE COST OF RESINS IS 50 CENTS PER POUND WITH A RANGE OF 20 CENTS PER POUND TO MORE THAN 2 DOLLARS PER POUND. RESINS WHICH SELL FOR LESS THAN 50 CENTS PER POUND REPRESENT APPROXIMATELY 80 PERCENT OF THE VOLUME OF THE INDUSTRY. THUS, THE PENNY-A-POUND TAX WOULD REPRESENT AN OVERALL AVERAGE INCREASE OF 2 PERCENT IN THE COST OF RAW MATERIALS. FOR RESINS SUCH AS POLYETHYLENE WHICH SELLS FOR ABOUT 33 CENTS PER POUND THE PERCENTAGE INCREASE IS APPROXIMATELY 6 PERCENT.

NOW LET ME DESCRIBE THE IMPACT OF SUCH AN INCREASE ON THE PLASTICS PROCESSOR. SPI CONDUCTS AN ANNUAL FINANCIAL AND OPERATING RATIOS SURVEY OF THE PLASTICS PROCESSOR SEGMENT OF OUR INDUSTRY. OF THE TOTAL 268 RESPONDENTS TO THE SURVEY, 43.6 PERCENT HAVE ANNUAL SALES OF LESS THAN $5 MILLION; 69 PERCENT HAVE SALES OF LESS THAN $10 MILLION. FOR THESE SMALL COMPANIES, WHOSE AVERAGE AFTER TAX INCOME IS ONLY 3.2 CENTS ON EACH SALES DOLLAR, AND FOR WHOM THE RAW MATERIALS COST NOW REPRESENTS 42.8 CENTS OF EVERY SALES DOLLAR, A 2 TO 6 PERCENT INCREASE IN RAW MATERIALS COSTS WOULD CONSUME AT LEAST TWO THIRDS OF THE PRESENT AFTER TAX INCOME. IN SOME INSTANCES THE INCREASED RAW MATERIALS COST WOULD EXCEED THE PRESENT AFTER TAX INCOME.

OBVIOUSLY IF THE PLASTICS PROCESSOR INDUSTRY IS TO SURVIVE, THIS TAX BURDEN MUST BE PASSED ON TO CUSTOMERS. BUT THERE ARE MANY INSTANCES WHERE THIS WILL NOT BE POSSIBLE AND MANY OF THE COMPANIES HAVE SUCH SMALL PROFIT MARGINS THEY CANNOT ABSORB THE ADDITION COST. A MAJOR INCREASE IN THE FEEDSTOCK TAX WILL HAVE A DECIDED NEGATIVE IMPACT ON THE FINANCIAL VIABILITY OF THESE COMPANIES.

FOREIGN TRADE IS BECOMING A MAJOR MARKET FOR THE PLASTICS INDUSTRY AND THE ADDED TAX BURDEN WILL PUT AMERICAN PLASTICS PROCESSORS AT A SERIOUS DISADVANTAGE WORLDWIDE. BETWEEN 1978 AND 1982, THERE WAS A TRIPLING OF IMPORTED PRODUCTS CLEARLY IDENTIFIED BY THE U.S. TARIFF CODE DESIGNATION AS PLASTICS. REINFORCING THIS TREND IS THE PROSPECT THAT INEXPENSIVE PLASTICS RESINS MAY BE PRODUCED LATER IN THIS DECADE BY OIL AND GAS RICH COUNTRIES AND MADE AVAILABLE TO PROCESSORS IN OTHER COUNTRIES. THIS PROSPECT PROMISES TO MAKE IT EVEN MORE DIFFICULT FOR U.S. PLASTICS PROCESSORS TO COMPETE WITH IMPORTS. WE ARE AN INDUSTRY THAT BELIEVES IN FREE TRADE PRINCIPLES AND WOULD BE RELUCTANT TO SEEK PROTECTIONIST REMEDIES. WE PREFER TO COMPETE WITH OTHERS ON A FAIR BASIS, BUT THAT TASK IS NOT MADE EASIER IF PETROCHEMICAL FEEDSTOCKS AND ULTIMATELY THEIR DERIVATIVE PRODUCTS MUST CONTINUE TO BEAR THE MAJOR SHARE OF FUNDING PROGRAMS LIKE SUPERFUND. THIS IS AN UNJUSTIFIED TAX BURDEN ON AN INDUSTRY THAT CONTRIBUTES VERY LITTLE TO THE HAZARDOUS WASTE PROBLEM. THOSE THAT WOULD BE HURT THE MOST ARE THE THOUSANDS OF PROCESSORS WHO WOULD BE FORCED TO PAY MORE FOR RAW MATERIALS EVEN THOUGH THEY ARE NOT GENERATORS OF HAZARDOUS WASTE.

WE URGE THE FINANCE COMMITTEE AND THE SENATE TO EXPLORE ALTERNATIVE METHODS OF RAISING ADDITIONAL REVENUE FOR SUPERFUND. WE BELIEVE THE WASTE END APPROACH IS A REASONABLE APPROACH AND WOULD COMMEND TO YOU ITS SERIOUS STUDY. A NATIONAL WASTE END TAX WOULD INCREASE REVENUES FOR THE FUND AND PROVIDE ECONOMIC INCENTIVE FOR COMPANIES TO CREATE AND UTILIZE ALTERNATIVES TO DISPOSAL OF HAZARDOUS WASTE IN THE GROUND. LAND DISPOSAL OF HAZARDOUS WASTE HAS RESULTED IN THE NEED FOR SUPERFUND, AND SPI BELIEVES A PORTION OF THE TAX BURDEN SHOULD BE BORNE BY THOSE WHO CONTRIBUTE TO THE PROBLEM.

IN SUMMARY, SPI URGES THE FINANCE COMMITTEE TO SUPPORT THE REAUTHORIZATION OF SUPERFUND AT A LEVEL THAT REFLECTS THE AMOUNT OF MONEY EPA CAN EFFECTIVELY ADMINISTER TO MAKE REAL PROGRESS IN CLEANING THE HAZARDOUS WASTE SITES. WE ALSO URGE YOU TO CAREFULLY STUDY RECOMMENDATIONS TO BROADEN THE TAX BASE FOR SUPERFUND SO THAT AN EXCESSIVE BURDEN WILL NOT BE BORNE BY A NARROW SECTOR OF INDUSTRY, INCLUDING THE SMALL PLASTICS PROCESSORS THE SPI REPRESENTS.

THANK YOU.

STATEMENT OF JOSEPH W. O'TOOLE, VICE PRESIDENT AND GENERAL TAX OFFICER, PHILLIPS PETROLEUM CO., BARTLESVILLE, OK, ON BEHALF OF THE AMERICAN PETROLEUM INSTITUTE, WASHINGTON, DC

Mr. O'Toole. Thank you, Mr. Chairman. I am Joseph O'Toole, vice president of Phillips Petroleum Co., and I am here today representing the American Petroleum Institute. The American Petroleum Institute recognizes the urgent national needs for cleanup of abandoned hazardous wastesites. We are not opposed to the reauthorization of CERCLA, if it is done efficiently and equitably. In these regards, we are troubled by the House CERCLA reauthorization bill, H.R. 5640, before the committee. First, the bill is based on conclusions about funding and other key elements of cleaning up hazardous waste before the facts are in, and the needed studies have been completed. A vital congressional study mandated by CERCLA will be available from the EPA before December 11, 1984. We understand that the EPA in fact intends to release the draft of that study for public comment by October 15.

We urge the committee to do what was contemplated when CERCLA was passed, namely, to examine this comprehensive study before redesigning and reauthorizing CERCLA. Furthermore, there is adequate money available to the EPA to meet its expenditure plans through September 30, 1985. The funding for the law doesn't need reauthorization before the end of fiscal year 1985. Loading more money onto EPA right now without the guidance of the studies to be available in less than 3 months will simply invite waste and mismanagement of the taxpayers' money. Second, the two bills would aggravate and exaggerate the inequitable treatment of the petroleum industry. While an underlying principle of CERCLA is to link the taxes to the generators of hazardous waste, the petroleum industry is currently paying about 15 percent of the taxes while, according to the EPA, it is linked to only 5 percent of its hazardous wastes. The House bill would gravely worsen this situation by enacting a tenfold increase in the tax on the petroleum industry. This will do enormous harm to both a contracting refining industry and to many of the sectors of the U.S. economy which this industry supplies. We urge the committee to reexamine the tax allocation with a view to substantially improving its equity and reducing the harmful competitive burdens proposed to be levied on the petroleum industry and its customers. Mr. Chairman, that concludes my statement on behalf of the API. I would like to make one other point. Phillips Petroleum has a large plastics business, and it is severely affected by the CERCLA taxes. And I would like to offer a short statement of two pages for the record for that, and I would like to mention that I would be pleased to answer any questions you may have on that statement. Thank you.

The Chairman. Thank you. Mr. Taylor.

[Mr. O'Toole's prepared written statements follow:]

STATEMENT OF THE

AMERICAN PETROLEUM INSTITUTE

SUBMITTED TO THE

COMMITTEE ON FINANCE

UNITED STATES SENATE

Regarding

HEARINGS ON TAX ISSUES
RAISED BY THE SUPERFUND
LEGISLATION

Washington, D. C.

September 21, 1984

TAX ISSUES RAISED BY SUPERFUND LEGISLATION

SUMMARY STATEMENT
AMERICAN PETROLEUM INSTITUTE
September 21, 1984

API does not oppose reauthorization of CERCLA. Reauthorizing now, however, is unnecessary and premature.

- Current authorization does not expire for another full year.
- Section 301(a) studies mandated by Congress assessing current operations and future funding needs will soon be available.
- Increasing, modifying or supplanting the current taxing scheme requires detailed analysis which cannot be properly completed during the time remaining in this Congress.

The current CERCLA tax system is both economically inefficient and inequitable. Proposed increases exacerbate those problems.

- It taxes current production to pay for past waste disposal.
- It taxes a limited group of taxpayers to clean up all hazardous wastes.
- HR 5640 completely decouples the original Superfund relationship between the tax assigned to the petroleum industry and the frequency with which petroleum substances are detected in releases subject to payment under the fund.

The proposed increase would have serious implications for the domestic refining industry.

- Demand for refined products is weak -- 15 percent below the late 1970's.
- U.S. refineries are currently running at about 3/4 capacity.
- Between the beginning of 1981 and the beginning of 1984, 86 U.S. refineries completely shut down.
- Refiners face huge costs to meet environmental standards, such as reduced lead content in gasoline.
- U.S. refiners will be under considerable pressure from foreign refiners.

The proposed tax increases would have unequal regional impact.

- Nearly 60 percent of the petroleum tax would come from three states -- Louisiana, Texas, and California.

API opposes repeal of the Post-Closure Liability Fund.

- HR 5640's proposed repeal would discourage cleanup by opening up unlimited liability for an indefinite future.
- Continuation of the taxes will assure a reliable source of funds for the EPA to handle clean-up problems after closure of current RCRA disposal sites.

September 18, 1984

Mr. Chairman:

I am Joseph W. O'Toole, Vice President and General Tax Officer of Phillips Petroleum Company.

I am testifying today on behalf of the American Petroleum Institute (API). API represents 235 petroleum companies and approximately 7,000 individual members who are engaged in all aspects of petroleum exploration, production, transportation, refining and marketing.

While our testimony today will be confined to funding aspects of reauthorization, API has strong concerns about other parts of the two bills under consideration -- HR 5640, passed by the House of Representatives, and S 2892, reported by the Senate Committee on Environment and Public Works. We have testified before other committees of both the Senate and the House on these other provisions.

I. Reauthorization of CERCLA (Superfund)

The API and its member companies do not oppose the reauthorization of CERCLA (Superfund). We believe that the timely and cost-effective cleanup of abandoned hazardous waste sites is an issue of major national concern and deserves government action.

We are concerned, however, that the present effort at reauthorization -- a full year before the current funding expires -- is premature. More information is needed on both total and annual funding needs as well as on the effects of the method or methods of funding. Reauthorization now, before this basic information has been properly analyzed, could lead to further inefficiencies in use of the fund and further inequities in application of the tax.

Important information will soon become available. When Superfund was passed in 1980, Congress recognized that it needed certain crucial information before taking further action. It mandated, under Section 301(a) of Superfund, a comprehensive report to assess the current operations and future needs of the Superfund program which, together with legislative recommendations, must be submitted before the end of this year. That report will detail, among other things, experience with the implementation of CERCLA, the effectiveness of the Response Fund, recoveries from responsible parties, and future funding needs. In recent testimony before the House Ways and Means and the

Senate Environment and Public Works Committees, EPA Assistant Administrator Lee M. Thomas has indicated the Section 301(a) report will be available well before the December 11, 1984 deadline.

The current Superfund authorization does not expire until the end of fiscal year 1985. Because of the time afforded by the current authorization, the need for more accurate assessment, and the additional information that will become available later this year, it is our recommendation that no legislative action be taken now to extend or expand the funding. The original Superfund was created in an atmosphere of haste resulting in many unnecessary administrative problems which even today have not all been resolved. This mistake should not be repeated. There is no need for precipitous action. There is time to act judiciously before the present petroleum and chemical taxes expire.

In March 15, 1984, testimony before the House Subcommittee on Commerce, Transportation and Tourism, William Ruckelshaus, EPA Administrator, expressed his concerns about the dangers posed by premature reauthorization. He said, "I am troubled by the possibility that proceeding to reauthorize in the absence of the studies and further program experience, particularly when reauthorization is not necessary, could result in unwise legislative decisions which a little more time, experience, and analysis could avoid."

Funding

Prudent management of the program requires a careful assessment of both the total funds necessary and EPA's annual funding requirements. Congress should not impose taxes at a rate beyond EPA's ability to effectively use them.

At present, estimates of the total funds necessary for the next five years are uncertain because both the cost of cleanup and the portion of that total cost that must be met by federal taxes are unclear. The total cleanup cost will depend in large measure on the number of sites that may require federal funding. But, at present, there are large differences among various estimates of the number of sites that will require action by the federal government. Furthermore, the cost per site may change as the cleanup program proceeds. Because the most significant sites are being addressed first, it can reasonably be anticipated that if the Superfund mandate is not expanded, future cleanup costs may well be less than current experience now suggests.

Funding needs will also be greatly affected by the portion of cleanup costs that will be borne by responsible parties. The EPA has recently developed guidelines for negotiating with potentially responsible parties which would require them to agree to reimburse a minimum of 80 percent of costs. Commonly used estimates of cost recovery from potentially responsible parties have been substantially below this level. Funding needs estimates would be lower if cost recovery estimates were based more closely on the EPA guidelines.

Additional factors that will affect total funding needs are: cleanup standards, restrictions on voluntary cleanup actions, interest earned on cash balances, and operation and maintenance costs. Other costs may also be subject to recovery.

Choosing to arbitrarily increase the pace of cleanup, and thus to increase annual funding needs, before firm information is in hand, increases the risk that EPA would be unable to allocate, employ, and monitor the funds efficiently. EPA Administrator Ruckelshaus in his recent Congressional testimony warned that "additional infusions" of funding beyond EPA's capabilities "could have the paradoxical effect of retarding our activities, not speeding them up." Mr. Ruckelshaus concluded that additional infusions of money at too great a rate had the potential for "building in waste."

CERCLA Tax System

Any changes in the sources of revenue for the Hazardous Substance Response Trust Fund should be based on demonstrated need, economic efficiency, and improved funding equity derived from a relationship between the problem and its cause.

The current CERCLA tax system is neither economically efficient nor equitable. The increases in the petroleum and chemical feedstock taxes proposed in the House bill, HR 5640, or implied by S 2892, would make the tax scheme even less equitable. Furthermore, unlike existing law, neither bill provides a "capping" or "trigger" mechanism to deal with unobligated balances in the Trust Fund.

The main purpose of CERCLA is not to address present and future waste disposal practices. That task is undertaken through the Resource Conservation and Recovery Act (RCRA). Yet, the present CERCLA tax system taxes current production to pay for past waste disposal actions, with no relationship established between existing producers who must pay the tax and past disposers of waste. A more efficient, and also more equitable, tax system would broaden the tax base and link the tax burden with those who contributed to or benefitted from past disposal practices.

While the taxation of current operations to pay for past problems is in itself not economically efficient, imposing the financial burden of cleaning up all hazardous waste generated in the past on such a limited group of taxpayers surely exacerbates the inefficiency and inequity. In the House-passed bill, there is a complete decoupling of the relationship between the tax assigned to the petroleum industry and the frequency with which petroleum substances are detected in releases subject to payment under the fund. Thus, there is an abandonment of the intellectual basis of the original tax which allocated shares of that 7/8 of the fund burden assigned to private industry based upon its perceived waste generation as follows: 15 percent petroleum, 65 percent from primary petrochemicals, and 20 percent from inorganic raw materials. The share allocated to the petroleum tax under HR 5640 would be increased to over 30 percent and could be as high as 38 percent of the private industry portion of the fund.

HR 5640 would increase the petroleum tax rate 10 to 12 times. The tax on crude oil would increase from .79 cents per barrel to 7.86 cents per barrel. Indeed, if a waste end tax were not enacted by July 1, 1986, then the crude oil tax would increase to 9.65 cents per barrel. In addition, Title IV of HR 5640 adds 1.3 cents tax per barrel of oil to fund an oil pollution liability fund. API believes that this issue should not be addressed in CERCLA legislation. The Joint Committee on Taxation has estimated that the increased funding authorized in S 2892 would require an increase in the petroleum tax rate to at least 3.64 cents per barrel if the proportionate share of taxes under the current law were maintained.

Impact on Domestic Refining Industry

Such increases would have serious implications for the domestic refining industry. Each one cent of a per-barrel-tax on crude oil would raise domestic refiners' costs by about $50 million per year.

The additional cost burden on domestic refiners would come at a time when demand for refined products is weak and there is substantial idle capacity in the domestic refining industry. Despite the economic recovery, U.S. demand for refined products still is about 15 percent below where it was in the late 1970's; and despite a substantial reduction in total operable capacity, U.S. refineries currently are running at only about three-quarters of capacity.

Domestic refiners face huge costs to meet environmental standards in the months and years ahead. The Environmental Protection Agency estimates that it would cost refiners about $575 million by 1986 if proposed new standards for reduced lead content in gasoline are adopted. This is in addition to other large environmental compliance costs needed to meet air, water, and solid waste standards.

The net result of higher taxes on crude oil in an environment of weak refiner product demand, substantial overcapacity, depressed refiner margins, and escalating pollution control costs would be further shrinkage of the domestic refining industry. There already has been a marked decline in domestic refining capability. Since the beginning of 1981, domestic refining capacity has fallen by 2.5 million barrels per day, or by about

13 percent. And between the beginning of 1981 and the beginning of 1984, 86 refineries had completely shut down, or about 27 percent of the operable refineries at the start of 1981. Further shutdowns might well make the U.S. economy heavily dependent upon foreign refiners for needed product supplies.

Foreign refiners already have sharply increased their exports of gasoline to the U.S.; this volume has nearly doubled since 1981. Moreover, OPEC countries have undertaken a massive refinery construction program. Over the next two to three years, the Persian Gulf states will raise their refining capacity by about 1.3 million barrels per day; Saudi Arabia alone has under construction refining capacity of about 900,000 barrels per day. OPEC countries outside the Persian Gulf are expected to add another 500,000 barrels per day of new capacity. In light of these developments, it is clear that domestic refiners will be under considerable pressure from foreign sources in the years ahead.

Regional Impact

Not only would the proposed tax increases impose a disproportionate and damaging burden on the U.S. petroleum industry, they also have extremely unequal impact across the country. In fact, firms in only two states, Louisiana and Texas, would account for 42 percent of the revenues raised by the petroleum tax. And companies in a third state, California, would add another 15 percent. Almost 60 percent of the tax would be imposed on economic activity in just three states even though those states account for only six percent of hazardous waste sites on the NPL.

Superfund cleanup of hazardous waste sites has been determined by Congress to be a national problem, yet it clearly has regional impacts, both in the burden of the funding and the benefits of the cleanup activities. We would hope that Congress would carefully review these regional effects to assure the most equitable distribution of funding.

The Section 301(a) studies are to include an analysis of the feasibility and desirability of different tax systems for financing response activities. To rush to reauthorize without the benefit of that analysis when there is another full year authorization under existing law could both weaken the ability of EPA to meet its mandate and seriously impair the economic recovery of the petroleum refining industry.

Repeal of the Post-Closure Liability Fund

HR 5640 would repeal the Post-Closure Liability Trust Fund. API opposes this. Repeal would discourage cleanup because it would open up unlimited liability for an indefinite future to any party entering into a cleanup agreement. A private party -- no matter how small its involvement -- could not afford to accept that risk and would have little choice but to avoid entering into any cleanup agreement. Thus, voluntary cleanup efforts would be greatly reduced and would be replaced by acrimonious legal proceedings.

Instead of repeal, continuation of the taxes now imposed to finance the Post-Closure Liability Trust Fund will assure a reliable source of funds for the Administrator to handle any clean-up problems that may occur after closure of current RCRA disposal sites. These taxes are levied on all persons who operate either onsite or offsite disposal facilities.

Repeal of the Post-Closure Liability Trust Fund would create cleanup problems in the future. It is not enough to simply clean up the problems of yesterday. We must anticipate the potential problems of the future and provide necessary funds to deal with them. Repeal of the Fund fails to accomplish this.

STATEMENT OF ROGER WINSLOW, PRESIDENT, VOLTMASTER CO., CORYDON, IA, AND VICE PRESIDENT OF THE BATTERY COUNCIL INTERNATIONAL, WASHINGTON, DC

Mr. WINSLOW. We appreciate the opportunity to bring before this committee the concerns of the automotive and industrial battery manufacturing industry. I am Roger Winslow, president of Voltmaster Co. in Corydon, IA. I also serve as vice president of the Battery Council International, a trade association of manufacturers of lead-acid-storage batteries. With me on my left is John McClun, vice president for operations of GNB Batteries, St. Paul, MN, and Robert Wilbur, director of Government relations for the Battery Council International.

Despite the years of research on exotic batteries, there is no economical substitute for the lead-acid-storage battery and no replacement on the horizon. You have to have lead in the storage battery to make it work, and the American consumer has to have a lead-acid battery to start his car.

The typical automotive battery contains approximately 22 pounds of lead and lead oxide. Industrial batteries which range from those used in electric forklift trucks to the larger and more complex batteries used by utilities for load leveling and on nuclear submarines use far more lead. The industry used 890,000 tons of lead to make automotive and industrial batteries in 1983 and paid the tax on lead oxide in accordance with the existing Superfund legislation. The lead oxide used in lead acid storage batteries is approximately 40 percent by weight of the total lead content. If the Superfund tax were extended from lead oxide to all lead in the battery and the tax rate increased simultaneously, the impact on our industry and our customers would be severe. Under the House bill, the tax we pay whether directly or passed on to us from our lead suppliers would go up tenfold from about $1 million $350 thousand to about $13 million a year. The tax we pay on propylene in the battery cases and on sulfuric acid would bring the total cost to the battery industry to about $14 million a year. I would like to make two principal points about this tax—first its size and second, the way it is implemented. First, the majority of the lead used in batteries will be recycled. Every vehicle contains a battery which is made of hazardous substance. The battery industry, on its own without help from regulatory agencies, has built an infrastructure which does a better job of recycling hazardous material than any other industry, a fact that needs to be taken into account in this rulemaking process. The Bureau of Mines figures show that the lead recovered from batteries over the last 3 years is more than 55 percent of all lead used to make new batteries in the same 3 years. This is an industry which recycles. The lead we use this year will be recycled to at least this degree. An industry which uses recycled products and which sees to it that its products are recycled should be encouraged, not penalized. We ask that any decisions on the tax rate on lead or lead oxide used by the battery industry reflect this recycling. Either the tax rate should be adjusted or a credit should be announced at the start of each year by the Secretary of the Treasury to reduce the tax on lead to the degree to which the Bureau of Mines figures show that lead was recycled in the most recent year available.

Second, under the House bill, the tax paid per battery would amount to approximately 15 cents per battery. This is enough to upset the competitive equilibrium between domestic and imported products. While imported lead would be taxed under the bill, a product like a battery which is by weight predominantly lead or its immediate derivative lead oxide, would not be taxed. Imports of automotive replacement batteries reached $47 million in 1983. This does not count the batteries imported or already installed in imported cars, only replacement batteries. One reason for this increase in imports is that many of the overseas manufacturers are not incurring the very large costs of U.S.A firms for compliance with OSHA and EPA regulations.

The CHAIRMAN. Excuse me. If you could summarize your statement, please.

Mr. WINSLOW. Mr. Chairman, the battery industry is prepared to do its part in protecting our environment and our workers. We ask that this burden be fair, that it be reduced to recognize the environmentally sound contribution of recycling in our industry and that any tax paid by the U.S. battery industry should apply equally to imported products such as batteries which contain a significant amount of a taxable substance in its elemental form or an immediate derivative which can be readily measured. We understand that members of the committee are considering a fee on listed foreign secondary derivatives, including lead acid batteries, and we support this approach. We are submitting for consideration by the committee a position paper which gives further details of the points that I have tried to raise. We thank you for your consideration and would be pleased to answer any questions you may have.

The **Chairman**. Mr. Hansen?

[Mr. Winslow's prepared written statement follows:]

Battery Council International
WASHINGTON OFFICE:
1101 CONNECTICUT AVENUE, N.W. • WASHINGTON, D.C. 20036 • 202/857-1100

Statement of the Battery Council International
Before the Senate Finance Committee
Superfund Expansion and Protection Act of 1984
September 21, 1984

We appreciate the opportunity to bring before this committee the concerns of the automotive and industrial battery manufacturing industry. I am Roger Winslow, President of the Voltmaster Company of Corydon, Iowa. I also serve this year as Vice President of the Battery Council International, the trade association of manufacturers of lead acid storage batteries. With me is John McClung, Vice President, Operations, of GNB Batteries, St. Paul, Minnesota.

Despite the years of research on exotic batteries, there is no economical substitute for the lead-acid storage battery, and no replacement on the horizon. You have to have lead in a storage battery to make it work and the American consumer has to have a lead-acid battery to start his car. The typical automotive battery contains approximately 22 pounds of lead and lead oxide. Industrial batteries, which range from those used in electric fork-lift trucks to the larger and more complex batteries used by utilities for load-levelling and on nuclear submarines, use far more lead. The industry used 890,000 tons of lead to make automotive and industrial batteries in 1983 and paid the existing Superfund legislation in tax on lead oxide.

The lead oxide used in lead-acid storage batteries is approximately 40 percent by weight of the total lead content. If the Superfund tax were extended from lead oxide to all lead in the battery and the tax rate increased simultaneously, the impact on our industry and our customers would be severe. Under the House bill, the tax we pay (whether directly or passed on to us from our lead suppliers) on lead would go up ten-fold--from about $1,350,000 to about $13,000,000 a year. The tax we pay on propylene in the cases and on sulfuric acid would bring the total cost to the battery industry to about $14,000,000 a year.

I would like to make two principal points about this tax, its size, and the way it is implemented.

First, the majority of the lead used in batteries will be recycled. Bureau of Mines figures show that the lead recovered from batteries over the last three years is more than 55 percent of all lead used to make new batteries in the same three years. This is an industry which recycles. The lead we use this year will be recycled to at least this degree. An industry which uses recycled products and which sees to it that its products are recycled should be encouraged, not penalized. We ask that any decisions on the tax rate on lead and lead oxide used by the battery industry reflect this recycling. Either the tax rate should be adjusted or a credit should be announced at the start of each year by the Secretary of the Treasury to reduce the tax on lead to the degree to which the Bureau of Mines figures show that lead was recycled in the most recent year available.

Second, under the House bill, the tax paid per battery would amount to approximately $.15 per battery. This is enough to upset the competitive equilibrium between domestic and imported products. While imported lead would be taxed under the bill, a product like a battery, which is by weight predominately lead or its immediate derivative (lead oxide) would not be taxed. Imports of automotive replacement batteries reached 4.4 million in 1983. This does not count the batteries imported already installed in imported cars--only replacement batteries. One reason for this increase in imports is that many of the overseas manufacturers are not incurring the very large costs of U.S. firms for compliance with OSHA and EPA regulations.

Mr. Chairman, the battery industry is prepared to do its part in protecting our environment and our workers. We ask that this burden be fair, that it be reduced to recognize the environmentally sound contribution of recycling in our industry, and that any tax paid by the U.S. battery industry should apply equally to imported products, such as batteries, which contain a significant amount of a taxable substance in its elemental form or an immediate derivative which can readily be measured.

We are submitting for consideration by the Committee a position paper which gives further details of the points I have tried to raise. We thank you for your consideration.

Battery
Council
International

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September 20, 1984

Recommendations of The Battery Council International on H.R. 5640, The Superfund Expansion and Protection Act of 1984.

The Battery Council International (BCI) believes that

1. The proposed tax on "feedstock" chemicals should be reduced or rebated to the party which pays the tax to the extent that the industry's products are recycled; and that

2. Equality between domestic and imported products should be preserved by placing a fee on imported products made from or containing a substantial percentage of a taxable substance which will equal the costs accruing to the domestic industry under this Act.

BCI is a trade association representing 50 domestic manufacturers of lead-acid storage batteries, including seven large, integrated firms which account for 85 percent of U.S. production. The remaining 43 member companies are independent, regional manufacturers, many of them extremely small.

I. Recycling

It should be the purpose of the Act to encourage environmentally sound recovery as an alternative to disposal. Therefore, BCI recommends the Secretary of the Treasury should be instructed by Congress to reduce the fee imposed on any chemical or raw material under the Act by the percentage of that chemical or raw material that is recycled into the production of new substances subject to the fee.

Particularly with regard to lead, which H.R. 5640 lists as a chemical subject to tax, BCI believes such an adjustment is justified. The Bureau of Mines Minerals Yearbook for 1982 (the most recent statistics available) indicates that 774,755.3 tons of lead and lead oxide were used in battery manufacture in the United States in 1982, and that 480,916.7 tons of lead were recovered from lead battery plates in that year. In other words, approximately 62% of all lead used in battery manufacture in 1982 was recovered from recycled batteries. Because this percentage of the lead used in battery manufacture in 1985 and subsequent years will be recycled, instead of disposed of, BCI believes that if a tax on lead is retained in the Act, it should be reduced by this amount.

This recycling is environmentally right and should be encouraged. Metals, when recycled, are obviously removed from potential harm to the environment which might occur if products made from them were disposed of, either in dumps or regulated land fills.

BCI believes this adjustment is critical due to the economic impact the proposed tax will have on battery manufacturers. H.R. 5640 significantly expands the chemicals involved in battery manufacturing subject to tax and will increase the tax liability approximately ten fold. The original "Superfund tax" contained in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 included lead oxide in the list of chemicals subject to the tax. The typical automobile battery contains approximately 22 pounds of lead, of which approximately nine pounds is lead oxide. Battery manufacture includes the conversion of metallic lead into battery oxide, the pasting of oxide onto grids, assembly of the component parts, and charging of the finished battery. Battery oxide, the basic material for both positive and negative active material in battery plates, is comprised of approximately 30 percent metallic lead and 70 percent lead oxide. The proposed new tax would apply to the four pounds of metallic lead contained in battery oxide and also to the nine pounds of metallic lead contained in battery grids and posts. In other words, the newly proposed tax would apply for the first time to an additional 60 percent, or 13 pounds, of the lead in a typical automobile battery.

In 1983, 326,914 tons of lead oxide were used in battery manufacture in the United States. At a tax rate of $4.14 per ton, the 1983 tax on lead oxide was $1,353,422. An additional tax on the sulfuric acid and propylene used in battery manufacturing cost the industry approximately $373,000 for a total of $1,726,422. This already represents a very large contribution by our industry to the Comprehensive Environmental Response Fund. H.R. 5640, as passed by the House of Representatives, would impose a tax on lead of $8.27 per ton in 1985. Based on 1985 sales estimates, the tax on lead would be $7,340,361. After adding the tax on sulfuric acid and propylene used--approximately $534,000--this represents an increase in the tax liability for the battery manufacturing industry of nearly six fold. By 1988, the tax imposed on lead under H.R. 5640 would increase to $16.54 per ton and result in a tax liability of $14,680,722--an increase of more than ten-fold over the tax imposed on lead used by the industry under the current law. Total tax, counting a tax of approximately $1,067,000 on propylene and sulfuric acid, will rise to approximately $16,000,000 in 1988.

II. Equality of Fees on Domestic and Imported Products

As taxes on raw materials under Superfund are increased, a significant competitive disparity arises between products manufactured domestically and those imported from overseas. This disparity is most obvious when the manufactured product, as in the case of an automotive battery contains a substantial amount of a taxable substance (such as lead) in its original form or in a simple compound (lead oxide) which is easily measurable.

At the tax rates proposed in H.R. 5640, the tax paid on each automotive battery by 1988 will be approximately $.15. This is sufficient to create a market disadvantage for domestic producers who already face rising costs of environmental protection not incurred by many foreign manufacturers. Imports of replacement batteries reached 4.4 million in 1983 (another 2.4 million came in already installed in imported cars). To correct the competitive disadvantage which will be made worse by any increase in Superfund taxes, we recommend that a fee be placed on an imported product which contains fifty percent or more of a taxable chemical or its compounds equal to the costs incurred for manufacture or purchase of taxable raw materials by the domestic producer of that manufactured product.

STATEMENT OF CHRISTIAN A. HANSEN, JR., PRESIDENT, LCP CHEMICALS & PLASTICS, INC., EDISON, NJ, ON BEHALF OF THE CHLORINE INSTITUTE, WASHINGTON, DC

Mr. **Hansen**. Good morning. I am Chris Hansen, immediate past chairman of the Chlorine Institute and presently a member of the Chlorine Institute's Board of Directors. I am president and founder of LCP Chemicals and Plastics, a private company. We are 12 years old. We are the sixth largest chloralkali producer in the United States and the fifth largest producer of PVC pipe and fittings in the United States. We have headquarters in Edison, NJ, and 12 plants primarily in the eastern half of the United States—New Jersey, New York, Ohio, Maine, Georgia, North Carolina, and Florida.

The Chlorine Institute wishes to reaffirm its strong support of the Superfund goals and program. However, we are very concerned over several proposals, particularly as they were addressed by the House of Representatives. I will confine my comments to three points of discussion. The EPA has indicated that it will be prepared to make Superfund expenditures at the rate of about $1 billion annually by this time next year. Every Superfund proposal, however, suggests funding the program at a rate greatly in excess of what EPA can spend. This overfunding is wasteful and should not be done at a time when America needs to use all of its capital that it can to continue its productivity improvement efforts.

Second, the institute recommends the establishment of a waste-end tax. Such a tax will create an important incentive to stop the generation of hazardous waste. Furthermore, it will encourage efforts to employ nonland disposal techniques for hazardous waste. Obviously it will force participation of all waste producers in the cleanup and cost of proper disposal. Lastly, it will help correct the present inequitable situation where 70 percent of the tax is paid by a dozen companies on feedstock-type chemicals.

Finally, the institute is concerned about the proposed level of taxation of caustic soda and caustic potash. Both of these chemicals are not feedstock materials as normally used in that sense of the word. Both of these chemicals are environmentally beneficial. They are used to remove high sulfur levels from petroleum and natural gas and the treatment of drinking water and as FDA-approved peeling agents for fruits and vegetables. Potassium caustic potash is also used as a fertilizer and as an animal feedstock additive. Neither appears on any list of carcinogenic or mutagenic materials. The proposed Superfund taxation of caustic soda and caustic potash would be counterproductive to the goals of Superfund. It is the institute's strong recommendation that caustic soda and caustic potash be remove from the list of taxable compounds. At the very least, the gross injustice of increasing the tax on these environmentally sound materials by a tenfold and a 44-fold level under H.R. 5640 should be corrected. This increased taxation to these materials would represent an additional blow to the chloralkali industry which is already in an economically depressed condition.

In summary, we believe the Superfund effort should be concentrated on waste which actually caused the damage that Superfund is meant to end and on discouraging the production of additional hazardous waste in the first instance. Thank you, sir.

The CHAIRMAN. Thank you.

[Mr. Hansen's prepared written statement follows:]

STATEMENT
OF THE
CHLORINE INSTITUTE, INC.
ON
SUPERFUND PROPOSALS

BY CHRISTIAN A. HANSEN

PRESIDENT, LCP CHEMICALS & PLASTICS, INC.

BEFORE THE

COMMITTEE ON FINANCE

UNITED STATES SENATE

WASHINGTON, D.C.
SEPTEMBER 19, 1984

Mr. Chairman, Members of the Committee.

My name is Christian A. Hansen, and I am President of LCP Chemicals & Plastics. I am here today on behalf of the Chlorine Institute, Inc., a trade association composed of chlorine producers. Chlorine production accounts for the third largest contributing sector to Superfund, so we are in a unique position to comment on the Superfund expansion proposals now before Congress. We deeply appreciate the opportunity to appear before the Committee to discuss some of the proposals to extend the Superfund program. Our testimony today will focus primarily on issues inadequately addressed by the House of Representatives' Superfund legislation.

We wish to reaffirm, at the outset, that the Chlorine Institute supports the Superfund program. We share the concern of Congress that cleanup proceed rapidly and efficiently. And we recognize that a larger fund will help remedy these problems.

We are concerned that the Environmental Protection Agency be able to expend Superfund monies efficiently and effectively. The Agency itself has indicated that by the fourth quarter of 1985, it will be prepared to spend at a rate of only approximately one billion per year. Yet, every Superfund proposal speaks of funding at a rate of some $1.5 to $2.0 billion annually--substantially in excess of what EPA has said it can spend.

We submit this overfunding is nothing short of wasteful, to the extent revenue exceeds requirements.

It is wasteful because the manner in which this revenue will be raised effectively diverts funds that could be used for research and development aimed at mitigating environmental hazards. It is wasteful because it forces proportionately higher costs which are subsequently passed on to consumers. It is wasteful because it prevents the most efficient use of Superfund revenue.

Another inefficiency results from the present method of placing the tax burden of supporting Superfund on a mere handful of companies. At this time, only a dozen companies pay almost 70 percent of the Superfund taxes. Consequently, the thousands who handle and dispose of hazardous waste need not be overly concerned with Superfund -- after all, the dozen larger companies are carrying the burden for an entire industry.

There is a way to avoid the inequity and inefficiency of the current tax contribution structure. Simply, a "waste-end" or similar tax should be imposed upon the receipt of hazardous waste for land disposal or long-term storage. In conjunction with other funding methods, the waste-end tax could significantly alter the Superfund contributions base. A waste-end tax would force the participation of all hazardous waste disposers in the program, contributing substantially to the fund.

More important are the environmental and economic improvements to be gained by imposition of a waste-end tax.

Safer, alternative methods of waste treatment would become competitive with land disposal. The production of hazardous wastes generated and disposed of would be reduced, as the tax would place an economic disincentive on such production. Cleanup costs will be more equitably spread throughout the industry as all waste producers would be involved. The change to a waste-end tax will create an incentive-based approach to effective hazardous waste control.

It is important that the final Superfund legislation make clear that hazardous waste treatment and incineration not be subject to the waste disposal tax, while land disposal would remain a taxable event. This would encourage more responsible disposal of hazardous wastes, and those wastes disposed of in land sites would bear the burden of the cleanup costs incurred by land disposal.

By far the most disturbing inequity goes to the heart of the feedstock tax mechanism, however. Under the current taxing system, caustic soda (sodium hydroxide) and a related product, caustic potash (potassium hydroxide) are required to pay the feedstock tax. In the House version of the Superfund legislation, H.R. 5640, the tax contribution for caustic soda and caustic potash would rise from .28 and .22 per ton at present to $2.82 and $9.83 per ton, respectively, in 1985. This contributions amendment, if enacted, would cause a drastic if not disastrous change in the industry. Yet these chemical compounds have little to do with the environmental hazards Superfund was meant to control.

Caustic soda and caustic potash simply do not contribute to the hazardous waste problem. For example, both caustic soda and caustic potash are used for pollution control, helping to reduce high sulfur levels in natural gas and crude petroleum. Both are approved by the Food and Drug Administration as safe peeling agents for fruits and vegetables. Caustic soda is a extensively used in the treatment of drinking water and wastewater. Neither compound is on any list of suspected carcinogens, mutagens, or teratogens. These benefits are by no means the only significant aspects of the chemicals, but they serve to point out the wide-range of beneficial uses which caustic soda and caustic potash provide.

For the Committee's information I have attached a brief fact sheet on caustic soda and caustic potash to my testimony. It is critical to note that by taxing the production of these chemicals as "feedstock" material, the very intent of Superfund is defeated. The Superfund legislation was meant to protect Americans and our environment from dangerous, deadly wastes. To impose a continuing tax on caustic soda and caustic potash--highly beneficial chemicals--ignores their contribution to the health and environment of this Nation. Indeed, such a tax can only be termed counterproductive when applied to caustic soda and caustic potash.

The Committee faces a unique opportunity to refocus the direction of Superfund efforts in the years ahead. The Chlorine Institute urges you to take that opportunity, by scrutinizing the funding levels, enacting a waste-end type tax, and removing caustic soda and caustic potash from the list of chemicals taxed under Superfund. The result will be a Superfund that is more equitable, more efficient, and more attuned to the hazards creating the need for such legislation.

Thank you for permitting us this opportunity to voice our concerns over Superfund. This concludes my prepared statement, although I will be happy to answer any quesions the Committee might have.

Fact Sheet
On
Potassium Hydroxide (Caustic Potash)
and
Sodium Hydroxide (Caustic Soda)

Both potassium hydroxide and sodium hydroxide are chemicals which pose little threat to the environment or human life. Yet, proposals have been made to dramatically increase the Superfund tax on these beneficial chemicals.

The facts about potassium hydroxide and sodium hydroxide make it clear that the proposed taxation of the chemicals will be counterproductive and indeed inconsistent with the purposes of the Superfund.

SODIUM HYDROXIDE

- Approved by the Food and Drug Administration as a peeling aid for fruits and vegetables and as a direct food additive for acid neutralization.

- Some of its major uses as an acid neutralizer are directly related to pollution control, e.g.:

  Oil Refining - Caustic soda effectively removes hydrogen sulfide and sulfur dioxide in oil refining and in "sweetening" natural gas, thereby reducing sulfur dioxide emissions.

  Water Purification - Caustic soda is used in the treatment of drinking water and wastewater.

  Waste Control - Caustic soda is used to render certain hazardous wastes nonhazardous.

  Air Purification - Caustic soda is used to scrub sulfur compounds from power plant gases, thereby reducing sulfur dioxide emissions.

- According to the EPA survey of "Substances Associated With All Facilities," Sept. 7, 1983, Sodium Hydroxide was found in only 0.79% of the sites examined (7 of 881 sites), but more importantly it presented no threat to man and the environment.

- Many of its important uses are similar to those of naturally occurring soda ash and lime.

- It is not on any list of suspected carcinogens, mutagens, or teratogens.

POTASSIUM HYDROXIDE

- The largest single use of potassium hydroxide is in liquid and granular fertilizers, since potassium is one of the three essential elements for plant nutrition. It is also considered by the FDA to be a safe peeling agent for fruits and vegetables. Potassium hydroxide byproducts are added to animal feeds.

- Several of its uses, like sodium hydroxide, are for pollution control, e.g. the neutralization of hydrofluoric acid in oil, refining alkylation units, sweetening of high-sulfuric crude, and removal of hydrogen sulfide in purifying natural gas. Nearly half of the production is used to produce carbonates, phosphates, silicates, citrates, and other potassium salts used in foods, household products, and pharmaceuticals.

- Potassium hydroxide is a relatively low-volume product (est. 225,000 tons/yr.). According to the EPA survey of "Substances Associated With All Facilities," Sept. 7, 1983, "Potassium and Compounds" (not necessarily even potassium hydroxide) were found in only 1 of the 881 sites examined.

- Potassium hydroxide, like sodium hydroxide, is not on any list of suspected carcinogens, mutagens, or teratogens.

These two chemicals, so helpful in cleaning and maintaining our environment may well face a burdensome and counterproductive tax, despite their beneficial role in modern society.

The CHAIRMAN. Senator Moynihan?

Senator MOYNIHAN. Thank you, Mr. Chairman. Mr. Hansen commented on a waste-end tax as an efficient approach. Is it your judgment, as manufacturers, that a waste-end tax would provide an internal incentive for a firm not to produce any waste, or if they do so, not to ship it out of the plant, as you might say?

Mr. HANSEN. Yes, sir. We have seen time and again when incentives are provided to stop doing something, such as producing a hazardous waste material, the scientists, the engineers, the managers find ways and means to reduce those hazardous wastes, efficiently and effectively. It ends up being a positive factor for that operation as well as for the environment. So, we think it is an absolutely imperative thing to do.

Senator MOYNIHAN. Would a fair analogy be that when energy costs rose so dramatically in the 1970's, many plant managers who hadn't paid much attention to the subject started doing so and found that they could cut energy. That is the record of American manufacturing, is it not?

Mr. HANSEN. Yes, sir. Without any question, it is a very good analogy.

Senator MOYNIHAN. Thank you very much, Mr. Hansen. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Chafee?

Senator CHAFEE. Thank you very much, Mr. Chairman. The waste-end tax, in essence, has a lot of appeal, as in the point that you made with Senator Moynihan. But it has also been pointed out that it won't yield much revenue. What do you say to that?

Mr. HANSEN. I don't agree.

Senator CHAFEE. What we are concerned with here not only preventing future dumps from growing up, but also getting some revenue to clean up the dumps that exist. That is where the $7 to $10 billion figure comes from.

Mr. HANSEN. Yes, sir. I do not agree with the proposed level of taxation on hazardous waste. I think it should be increased and increased substantially. I believe that some recommendations are on the order of $50 a ton. I believe that is much too low. I believe the level should be two, three, or four times that level.

Senator CHAFEE. You mean for the waste end?

Mr. HANSEN. Yes, sir. And I believe that at the $50 level—estimates are that revenues would be raised on the order of $300 million. If that tax were increased fourfold, obviously that would go up to $1.2 billion.

Senator CHAFEE. No. I don't think that follows because if the tax is increased, it might have the further incentive of reducing the dumping.

Mr. HANSEN. I think if that were to happen, Senator, it would be a very good thing. I believe it will happen over the long pull, but it won't happen overnight. It takes time to accomplish these things. The analogy of energy is a good one. It has taken us 5 years, I think, to become much more energy efficient. So, I believe that there is an interim period of time where the $1.2 billion would apply, and it probably is a period of 2 or 3 years.

Senator CHAFEE. We are short of time here, and unfortunately we can't go into too much detail. Let me ask each of the panelists.

Dr. Nordhaus came up with a recommendation that looked at a tax on hydrocarbons. What do you think of that—good, bad, or indifferent? Mr. Winslow? In 10 seconds or less.

Mr. WINSLOW. I don't have anything to do with hydrocarbons.

Senator CHAFEE. OK. Mr. O'Toole?

Mr. O'TOOLE. Yes, sir. There is a tax on hydrocarbons right now, and our position is that it is too much.

Senator CHAFEE. So, you wouldn't support Dr. Nordhaus' suggestion?

Mr. O'TOOLE. Right.

Senator CHAFEE. Mr. Freeman?

Mr. FREEMAN. From what I know of it, we don't have a position on that, but I would want to know more before we could support it.

Senator CHAFEE. Mr. Hansen?

Mr. HANSEN. I am familiar with it, and I would not support it.

Senator CHAFEE. All right. Thank you very much, Mr. Chairman.

The CHAIRMAN. Senator Mitchell?

Senator MITCHELL. Thank you. Pursuing just briefly what Senator Chafee had asked, I wasn't here during Mr. Nordhaus' testimony, but looking at his written statement, he says the best revenue alternatives are general revenues, a corporate receipts tax, and a waste disposal tax. I would like to ask each of you to comment briefly on whether you favor increasing the portion derived from general revenues first, and second, whether you favor a corporate receipts tax as a means of financing. Mr. Hansen?

Mr. HANSEN. I do not favor the first two alternatives. I favor very strongly the hazardous waste generation and hazardous waste disposal tax. And in case you were not here, Senator, I proposed a much higher level of taxation on hazardous waste generation. Instead of $50 a ton, I would propose $100 or $200 a ton. The incentive must be placed on the generators to stop generating and on the people that dispose of it to dispose of it in an effective way, and that kind of a tax will do it.

Senator MITCHELL. Of course, if you raise the tax high enough, you will create a disincentive to perform the activity, and therefore the revenues won't be there.

Mr. HANSEN. Exactly. And a very good analogy has been made between this and what has happened in energy. With the high cost of energy, the American people have found ways to conserve energy, and now we are much more efficient. The same thing will happen to hazardous waste. If we tax the hazardous sufficiently, we will stop generating it.

Senator MITCHELL. Thank you. Could you answer just that area?

Mr. FREEMAN. We, the plastics industry, would still prefer to see additional revenue raised more from a waste-end tax than from other sources. We have not specifically addressed a general revenue or a corporate tax, and I have not heard about Dr. Nordhaus's proposal, but we do not at this time look favorably on that approach as much as the other.

Senator MITCHELL. Thank you. Mr. O'Toole?

Mr. O'TOOLE. Yes, Senator. We want to wait until the studies that EPA is to publish are out before we express a preference for which type of tax. We do think that the inequities in the current tax need to be removed.

Senator **Mitchell**. All right. Mr. Winslow?

Mr. **Winslow**. No. We don't believe in a general revenue tax for this matter. We feel that—at least in our particular industry—we don't have a problem with the tax, but we think we should get credit for the recycling that we do.

Senator **Mitchell**. And I would like to ask each of you if, in your own business judgment, with respect to your own private businesses—wholly apart from this—do you believe that there will be any inflation in the United States in the next 5 years?

Mr. **Hansen**. Yes, sir. I believe there will be some inflation in the United States in the next 5 years.

Senator **Mitchell**. And do you take that into account in your business planning?

Mr. **Hansen**. Yes, sir.

Senator **Mitchell**. Mr. Freeman?

Mr. **Freeman**. I represnt businesses and don't have a business myself, but yes, I imagine there would be some. And I think our members are taking some into account in their planning. Yes.

Senator **Mitchell**. All right. Mr. O'Toole?

Mr. **O'Toole**. Yes, sir. Phillips does anticipate that there will be some inflation, and we take that into account.

Senator **Mitchell**. Mr. Winslow?

Mr. **Winslow**. Yes, sir.

Senator **Mitchell**. I just will comment that the EPA estimates of what they can utilize over the next 5 years is based on no inflation anticipated over the next 5 years. In addition, it is based on no increase in cost for what they have to do in cleanup, even though their original estimate of cleaning up was $2.5 million a site in 1981. They revised it to $4.5 million a site in 1983. They revised it to $6.5 million in 1984, and yet they assume no increase in that. So, when we talk about what the level of funding should be, based upon EPA's estimates, we ought to understand the assumptions that went into those estimates.

Mr. **Hansen**. May I make one comment, Senator? I think we are in the beginning of the learning curve cycle, and I do believe that as we make progress in learning how to dispose of waste more efficiently and effectively, that those costs will be coming down. So, I would expect—based on other experiences that I have had in industry—that we will, with time, be able to effectively reduce the cost of disposal by a significant amount. So, I would expect the cost to go down, not up, in this industry.

Senator **Mitchell**. But we don't know when that point will be reached, Mr. Hansen.

Mr. **Hansen**. I know that American industry has done it time and time again where, in the beginning of a learning curve such as we are in here, the costs are very high, and that they come down dramatically as the technology is developed.

Senator **Mitchell**. All right. Gentlemen, thank you.

The **Chairman**. Senator Bradley?

Senator **Bradley**. I would like to ask each of you how you would respond to the following breakdowns by revenue source—feedstocks, 50 percent; general revenues, 30 percent; waste-end tax, 10 to 15 percent; cost recoveries, about 10 percent?

Mr. **Hansen**. Senator, I don't understand the question. I'm sorry.

Senator **Bradley**. I would like to ask each of you to respond to the following breakdown in tax burden. Right now, under the Superfund, the feedstock taxes provide 88 percent of all revenue. In the House bill, feedstock taxes provide 79 percent of all revenue. Would you support a bill that derived 50 percent from feedstock taxes, 30 percent from general revenues, 10 to 15 percent from waste-end tax, and 5 to 10 percent from cost recoveries?

Mr. **Hansen**. No, sir. The recovery from hazardous waste disposal and hazardous waste generation, in my judgment, is much too low, and the taxation on feedstock chemicals much too high.

The **Chairman**. So is the general revenues.

Senator **Bradley**. Too high?

Mr. **Hansen**. The feed-stock taxation. Yes, sir; and too low on hazardous waste themselves—much too low.

Mr. **Freeman**. I think, Senator, we would still like to see a less proportionate share of feed stocks, but what we would do is look at the individual tax on the individual feed stocks from which the plastic stream flows, such as ethylene and propylene, before we could make a definitive judgment. But again, our position is based on the fact that most of the products in our industry that come out of those two streams and others are not making any contribution to the hazardous waste problem, and we do not feel that they should pay more than their share. They should pay some share, but not a disproportionate share as they do now.

Mr. **O'Toole**. Senator, we believe that all these potential methods should be examined for raising the revenue. We would withhold judgment on how the rates should occur until we see the EPA studies.

Mr. **Winslow**. We believe that perhaps more emphasis ough to be given to the waste-end tax, but as to the breakdown that you gave, we feel there needs to be a little more information on it.

Senator **Bradley**. Does any member of the panel like the current arrangement—88 percent from feedstock?

Mr. **Hansen**. No, sir.

Mr. **Freeman**. No, sir.

Mr. **O'Toole**. No, sir.

Senator **Bradley**. But you all also do not like dropping that to 50 percent. Is that correct?

Mr. **Hansen**. That is not dropping it far enough, in my opinion.

Senator **Bradley**. All right. Do any of you have a concern with a waste-end tax that, if there is a tax waiting at the end of the line, that people who have toxic chemicals might find a way to get rid of those chemicals before they get to the end of the line and have to pay that tax? Is it not possibly an incentive for illegal dumping?

Mr. **Hansen**. Certainly, it provides an incentive for illegal dumping. I don't think there is any question about that. However, my own opinion is that the American people are basically an honorable people. There will be people who do abuse it, but by and large, I think the effect will be a reduction in the amount of waste that is generated by a significant amount. I have seen it happen a number of times.

Senator **Bradley**. Mr. Freeman.

Mr. **Freeman**. I suppose there are always incentives to find a way of getting around the law. I would like to think that that is an easier problem to deal with than the problem we might face with the incentive that we feel will be created for more imports to come in of petrochemically derived products.

Mr. O'TOOLE. We believe that there is a possibility, Senator, that the rates could be high enough so that they would create an incentive for illegal dumping, and that needs to be considered.

Senator BRADLEY. What is your position on a waste-end tax? I mean, you are saying that you believe that——

Mr. O'TOOLE. It could be too high. We don't have a position or endorsement for or against waste-end tax.

Senator BRADLEY. All right. I see.

Mr. WINSLOW. We feel that if the waste-end tax is too high, it could—

Senator BRADLEY. What is too high, Mr. Winslow?

Mr. WINSLOW. At this point, I can't tell you.

Senator BRADLEY. You know, this committee is called upon to make some very serious decisions in the next 10 days, and without the advice of the people who are involved, one doesn't know how we might come out with those decisions. It is much better I think to come in here with a specific recommendation as the previous witness did or Mr. Hansen—I think you have made some specific statements.

Mr. HANSEN. Senator, did you hear my recommendations on the level of taxation?

Senator BRADLEY. Yes, I did.

Mr. HANSEN. Of up to $200 a ton. I believe that is the sort of thing that needs to be considered, and I don't believe that is too high. There will be some illegal dumpers at any level.

Senator BRADLEY. Yes; just so that no one believes that the toxic waste problem has been solved, the legal deadline for updating the number of Superfund sites has passed, and the EPA has not provided any update in additional Superfund sites. We have gotten a copy of what EPA has decided but not announced, and the record should note that EPA at some point—hopefully before October 5—will reveal what they have decided internally, which is an addition of another 203 sites across this country. So, this problem is not decreasing. It is clearly going to increase by EPA's own analysis. So, the longer we put this off, the worse it yet. If they are delaying simply because they know that if they say there are another 203 sites, that that will generate pressure for action on this bill—I think they are making a big mistake. And I would like to put in the record this draft priorities update list, dated September 17.

The CHAIRMAN. Senator Symms.

Senator SYMMS. Thank you, Mr. Chairman. I kind of detect from the questions and answers that we are hearing here that there seems to be some doubt and disagreement on how much this tax should be from the entire panel. Is that correct?

Mr. WINSLOW. Yes; I think the problem is, as I sit here and represent the battery industry, we have some very distinct problems in our industry that you are trying to address with this bill. But our problems are different from those in other industries, and so it is not right for me to say, well, what is good for the battery industry is good for every industry. And I think each industry needs to be looked at individually and considered. When you try and throw everybody together, obviously it doesn't work that way. The nature of the products that we are talking about are different. Batteries are different than pipes, and chemicals, and so on.

Senator Symms. The petrochemical industry has been under a lot of pressure financially anyway, hasn't it?

Mr. O'Toole. Yes, it has, Senator.

Senator Symms. What is the impact going to be on employment on the House proposal on your industry, Mr. O'Toole?

Mr. O'Toole. Oh, that could be very serious, Senator. Our industry has been faced with imports from abroad. As you know, there are some very large and low-cost feed-stock plants coming onstream in the Middle East, and our industry is faced with the feed stocks coming into the United States and competing with them in the United States. And we are also faced with serious problems in our export market, which is very important to us. And this has put pressure on our business, and the tax proposals that we are looking at here would put additional pressure on our business and could cause some substantial employment problems.

Mr. Hansen. Senator Symms, I believe there is general agreement among the panel here that the Superfund tax should not be a level greater than can be spent efficiently. There are different suggestions being made to you about the composition of that revenue, but I think generally the feeling that I get from the panel here is that we would not recommend funding levels higher than can be spent efficiently for a number of reasons.

Senator Symms. How much do you think that could be?

Mr. Hansen. From what I know, Senator, it is on the order of $1 billion a year, and that is what I understand the EPA recommends—that level of funding, that they can spend effectively and efficiently.

Senator Symms. I would like to go back to Mr. O'Toole. You mentioned in your testimony the impact this would have on Phillips specifically. Just for my enlightenment—just give me an example—how would it affect your company?

Mr. O'Toole. Senator, we have a substantial plastics business, and we have about $560 million of revenue a year in our business, and we employ over 3,000 people. Right now, we are bearing about $2 million a year in tax in that business. And 25 percent of the business is export. The proposal before you would increase that tax up to $10 million or so. And we could not shift this tax into the export market nor the import market. So, it is going to cause this business possibly to turn into a loser business.

Senator Symms. So, we go from a profit to a loss and then go offshore?

Mr. O'Toole. Right; right now, we have actually just come into a profit. That business has been under competitive pressures and it was losing money during the last couple of years.

Senator Symms. I see my time is about up, Mr. Chairman, and I will have some more questions for the next panel. I might just say in closing that I don't know how all the other members of this committee are feeling about this, but it seems to me that we may end up getting the cart ahead of the horse if we try to move too fast on this legislation right now. We do have a program in place, and it is working. They have made some tremendous improvements in strides forward at EPA, and I personally feel like we would be better off to look at this thing next January or February.

The CHAIRMAN. We have a vote between 11:30 and 12, and I think I will defer any questions that I have. We have your statements. We appreciate your testimony. We do have nine more witnesses. I certainly don't disagree with Senator Symms. We are not going to rush anything out of this committee. But on the other hand, you know, the climate may be right for working out something that everyone would find satisfactory. Obviously, no one likes to pay taxes. I am still waiting for somebody to introduce Mr. Mondale's tax bill. So, there isn't any great demand out there for taxes. [Laughter.]

And we understand your problem. You are in business, but we don't have any general revenues either. That is the other problem. When Senator Bradley mentioned 30 percent, I vote against that right off the bat. We appreciate very much your testimony, and we will be working with you. Next, we have a panel consisting of Burgess Winter, senior vice president, operations, Kennecott; Richard Bauer, president, Eastern Alloys, Washington, DC. Mr. Winter.

[Copy of EPA document, draft priorities update list, dated September 17, 1984, follows:]

DRAFT NATIONAL PRIORITIES UPDATE LIST - SEPTEMBER 17, 1984
FEDERAL SITES LISTED BY STATE

ALABAMA

EPA REGION	CITY/COUNTY	SITE NAME
04	Anniston	Anniston Army Depot (SE Ind Area)
04	Childersburg	Alabama Army Ammunition Plant

CALIFORNIA

EPA REGION	CITY/COUNTY	SITE NAME
09	Sacramento	McClellan AFB Ground Water Contam.
09	Livermore	Lawrence Livermore Lab (USDOE)
09	Lathrop	Sharpe Army Depot
09	San Bernardino	Norton Air Force Base
09	Merced	Castle Air Force Base
09	Sacramento	Mather AFB (AC&W Disposal Site)

COLORADO

EPA REGION	CITY/COUNTY	SITE NAME
08	Commerce City	Rocky Mountain Arsenal (Excl. F)

DELAWARE

EPA REGION	CITY/COUNTY	SITE NAME
03	Dover	Dover Air Force Base

GEORGIA

EPA REGION	CITY/COUNTY	SITE NAME
04	Houston County	Robins Air Force Base

ILLINOIS

EPA REGION	CITY/COUNTY	SITE NAME
05	Williamson County	Crab Orchard NWR/Sangam (USDOI)
05	Savanna	Savanna Army Depot Activity
05	Joliet	Joliet Army Ammunition Plant

LOUISIANA

EPA REGION	CITY/COUNTY	SITE NAME
06	Shreveport	Louisiana Army Ammunitions Plant

MAINE

EPA REGION	CITY/COUNTY	SITE NAME
01	Brunswick	Brunswick Naval Air Station

MISSOURI

EPA REGION	CITY/COUNTY	SITE NAME
07	St. Charles Co.	Weldon Springs Quarry (USDOE/DOD)
07	Independence	Lake City Army Plant (NW Lagoon)

NEBRASKA

EPA REGION	CITY/COUNTY	SITE NAME
07	Hall County	Cornhusker Army Ammunition Plant

NEW JERSEY

EPA REGION	CITY/COUNTY	SITE NAME
02	Fort Dix	Fort Dix Landfill
02	Colts Neck	Naval Weapons Stat Earle (Site A)

NEW YORK

EPA REGION	CITY/COUNTY	SITE NAME
02	Rome	Griffiss Air Force Base

OREGON

EPA REGION	CITY/COUNTY	SITE NAME
10	Hermiston	Umatilla Army Depot

PENNSYLVANIA

EPA REGION	CITY/COUNTY	SITE NAME

03	Chambersburg	Letterkenny Army Depot

TENNESSEE

EPA REGION	CITY/COUNTY	SITE NAME
04	Milan	Milan Army Ammunition Plant

TEXAS

EPA REGION	CITY/COUNTY	SITE NAME
06	Fort Worth	Air Force Plant #4 (Gen Dynamics)
06	Texarkana	Lone Star Army Ammunition Plant

UTAH

EPA REGION	CITY/COUNTY	SITE NAME
08	Ogden	Hill Air Force Base
08	Ogden	Ogden Defense Depot
08	Tooele	Tooele Army Depot (North Area)

VIRGINIA

EPA REGION	CITY/COUNTY	SITE NAME
03	Richmond	Defense General Supply Center

WASHINGTON

EPA REGION	CITY/COUNTY	SITE NAME
10	Tacoma	Fort Lewis Landfills
10	Tacoma	McChord AFB (Wash Rack/Treatment)
10	Bremerton	Bangor Ordnance Disposal

DRAFT NATIONAL PRIORITIES UPDATE LIST - SEPTEMBER 17, 1984
PRIVATE SITES BY STATE

ARIZONA

EPA REGION	CITY/COUNTY	SITE NAME
09	Phoenix	Motorola (52nd Street Plant)

ARKANSAS

EPA REGION	CITY/COUNTY	SITE NAME
06	Ola/Birta	Midland Products

CALIFORNIA

EPA REGION	CITY/COUNTY	SITE NAME
09	San Jose	Van Waters & Rogers
09	Monterey Park	Operating Industries, Inc. Lf
09	Alviso	Alviso Dumping Areas
09	Sunnyvale	Monolithic Memories, Inc.
09	Los Angeles	San Fernando Valley (Area 1)
09	Los Angeles	San Fernando Valley (Area 2)
09	LA/Glendale	San Fernando Valley (Area 3)
09	Mountain View	Teledyne Semiconductor
09	Fresno	Thompson-Hayward Chemical Co.
09	Sunnyvale	Westinghouse (Sunnyvale Plant)
09	Fresno	FMC Corp. (Fresno Plant)
09	Roseville	Southern Pacific Transportation
09	Sunnyvale	Advanced Micro Devices, Inc.
09	Mountain View	Raytheon Corp.
09	South San Jose	Fairchild Camera (S. San Jose Pit)
09	Sunnyvale	National Semiconductor Corp.
09	Los Angeles	San Fernando Valley (Area 4)
09	Weed	J.H. Baxter Co.
09	Porterville	Beckman Instruments (Porterville)
09	San Jose	Lorentz Barrel & Drum
09	Torrance	Montrose Chemical Corp.
09	Oroville	Louisiana-Pacific Corp.
09	Stockton	Marley Cooling Tower Co.
09	Santa Clara	Applied Materials
09	Mountain View	Fairchild Camera (Mountain View I)
09	Mountain View	Intel Corp. (Mountain View Plume)
09	Santa Clara	Intel Corp. (Santa Clara III)
09	Santa Clara	Intel Magnetics
09	Santa Clara	Precision Monolithic, Inc.
09	Sunnyvale	Signetics, Inc.
09	E. Palo Alto	Zoecon Corp/Phone-Poulenc, Inc.

09	Salinas	Firestone Tire (Salinas Plant)
09	Palo Alto	Hewlett Packard
09	San Jose	IMB Corp. (San Jose Plant)

COLORADO

EPA REGION	CITY/COUNTY	SITE NAME
08	Minturn/Redcliff	Eagle Mine
08	Aspen	Smuggler Mine
08	Uravan	Uravan Uranium Project

FLORIDA

EPA REGION	CITY/COUNTY	SITE NAME
04	Tampa	Peak Oil Co./Bay Drum Co.
04	West Palm Beach	Pratt and Whitney Aircraft
04	South Miami	Davidson Lumber, Inc.
04	Cantonment	Dubose Oil Products Co.
04	Orlando	City Industries, Inc.
04	Hollister	Montco Research Products, Inc.

HAWAII

EPA REGION	CITY/COUNTY	SITE NAME
09	Oahu	Mililani Wells
09	Oahu	Waiawa Shaft
09	Oahu	Kunia Wells I
09	Oahu	Kunia Wells II
09	Oahu	Waipahu Wells
09	Oahu	Waipio Heights Wells II

ILLINOIS

EPA REGION	CITY/COUNTY	SITE NAME
05	Rockford	Pagel's Pit
05	West Chicago	Kerr-McGee (Reed-Keppler Park)
05	DuPage County	Kerr-McGee (Kress Creek)
05	Libertyville	Peterson Sand & Gravel
05	West Chicago	Kerr-McGee (Residential Areas)
05	Granite City	NL Industries/Taracop Lead Smelt
05	West Chicago	Kerr-McGee (Sewage Treat Plant)
05	Sheffield	U.S. Ecology, Inc. (Sheffield Lf)

INDIANA

EPA REGION	CITY/COUNTY	SITE NAME
05	Terre Haute	International Minerals (E. Plant)
05	Fort Wayne	Fort Wayne Reduction Dump
05	Spencer	Neal's Dump (Spencer)
05	Gary	MIDCO II

IOWA

EPA REGION	CITY/COUNTY	SITE NAME
07	Mount Vernon	U.S. Nameplate Co.

KANSAS

EPA REGION	CITY/COUNTY	SITE NAME
07	Furley	National Industrial Environ Serv
07	Cowley County	Strother Field Industrial Park
07	Witchita	Big River Sand Co.

KENTUCKY

EPA REGION	CITY/COUNTY	SITE NAME
04	Brooks	Smith's Farm
04	Hillsboro	Maxey Flats Nuclear Disposal

MARYLAND

EPA REGION	CITY/COUNTY	SITE NAME
03	Harmans	Mid-Atlantic Wood Preservers, Inc. V
03	Hollywood	Southern Maryland Wood Treating
03	Baltimore	Kane & Lombard Street Drums

MASSACHUSETTS

EPA REGION	CITY/COUNTY	SITE NAME
01	Salem	Salem Acres
01	Lanesboro	Sarney Farm
01	Haverhill	Haverhill Municipal Landfill
01	Norton/Attleboro	Shpack Landfill
01	Norwood	Norwood PCBs

MICHIGAN

EPA REGION	CITY/COUNTY	SITE NAME
05	Muskegon	Thermo-Chem, Inc.
05	Lansing	Motor Wheel. Inc.
05	Houghton County	Torch Lake
05	Kalamazoo	Roto-Finish Co., Inc.
05	Montague	E.I. DuPont (Montague Plant)
05	Adrian	Lenawee Disposal Service. Inc. Lf
05	Kalamazoo	Michigan Disposal/Cork St Lf
05	Holland	Waste Management (Holl Lagoons)
05	Grand Rapids	Lacks Industries, Inc.
05	Bronson	North Bronson Industries
05	Macomb Twp.	South Macomb Disposal Site #9
05	Traverse City	Avenue "E" Ground Water Contam.

MINNESOTA

EPA REGION	CITY/COUNTY	SITE NAME
05	Dakota County	Pine Bend/Crosby American Lf
05	Rosemount	U of Minnesota Rosemount Res Cent
05	Oak Grove Twp.	Oak Grove Sanitary Landfill
05	Bemidji	Kummer Sanitary Landfill
05	Windom	Windom Dump
05	Adrian	Adrian Ground Water Contamination
05	Oronoco	Olmsted County Sanitary Landfill
05	Long Prairie	Long Prairie Ground Water Contam.
05	Fridley	Kurt Manufacturing Co.
05	Fairview Twp.	Agate Lake Scrapyard
05	Pine Brook	Koch Refining Co./N-Ren Corp.

MISSISSIPPI

EPA REGION	CITY/COUNTY	SITE NAME
04	Columbia	Newsom Brothers/Old Reichold

MISSOURI

EPA REGION	CITY/COUNTY	SITE NAME
07	Liberty	Lee Chemical
07	Sikeston	Quality Plating
07	St. Charles	Findett Corp.
07	Republic	Solid State Circuits, Inc.
07	Springfield	North-U Drive Well Contamination
07	Malden	Bee Cee Manufacturing Co.

MONTANA

EPA REGION	CITY/COUNTY	SITE NAME
08	Bozeman	Idaho Pole Co.
08	Somers	Burlington Northern (Somers Plant)
08	Columbus	Mouat Industries - Timberweld

NEBRASKA

EPA REGION	CITY/COUNTY	SITE NAME
07	Hastings	Hastings Ground Water Contamination
07	Waverly	Waverly Ground Water Contamination

NEW HAMPSHIRE

EPA REGION	CITY/COUNTY	SITE NAME
01	North Hampton	Coakley Landfill

NEW JERSEY

EPA REGION	CITY/COUNTY	SITE NAME
02	Glen Ridge	Glen Ridge Radium Site
02	Montclair/W. Orange	Montclaire/West Orange Radium Site
02	Wall Township	Waldick Aerospace Devices. Inc.
02	Cinnaminson	Cinnaminson Ground Water Contam.
02	E. Brunswick Twp.	Fried Industries
02	Lodi	Lodi Municipal Well
02	Galloway Twp.	Pomona Oaks Residential Wells
02	Bound Brook	Jame Fine Chemical

NEW YORK

EPA REGION	CITY/COUNTY	SITE NAME
02	Farmingdale	Liberty Industrial Finishing
02	Town of Johnstown	Johnstown City Landfill
02	Hicksville	Hooker Chemical/Ruco Polymer Corp.
02	Farmingdale	Tronic Plating Co., Inc.
02	Glenwood Landing	Applied Environmental Services
02	Maybrook	Nepera Chemical Co., Inc.
02	Hempstead	Pasley Solvents & Chemicals, Inc.
02	Deer Park	SMS Instruments. Inc.
02	Hicksville	Anchor Chemicals
02	Village of Endicott	Endicott Village Well Field
02	Village of Suffern	Suffern Village Well Field
02	Town of Bedford	Katonah Municipal Well
02	Farmingdale	Preferred Plating Corp.
02	Town of Granby	Clothier Disposal

02	North Sea	North Sea Municipal Landfill
02	Town of Hyde Park	Haviland Complex
02	Plattekill	Hertel Landfill
02	Holbrook	Goldisc Recordings, Inc.
02	Town of Shelby	FMC Corp. (Dublin Road Landfill)
02	Town of Volney	Volney Municipal Landfill
02	Village of Narrowsburg	Cortese Landfill
02	Farmingdale	Kenmark Textile Corp.
02	Old Bethpage	Claremont Polychemical
02	Town of Vestal	BEC Trucking
02	Town of Vestal	Robintech, Inc./National Pipe Co.
02	Town of Colesville	Colesville Municipal Landfill

NORTH CAROLINA

EPA REGION	CITY/COUNTY	SITE NAME
04	Raleigh	NC State U (Lot 86, Farm Unit #1) V
04	Shelby	Celeanese (Shelby Fiber Operations)
04	Belmont	Jadco-Hughes Facility
04	Concord	Bypass 601 Ground Water Contam.

OHIO

EPA REGION	CITY/COUNTY	SITE NAME
05	Uniontown	Industrial Excess Landfill
05	Coshocton	General Electric (Coshocton Plant)
05	Gnadenhutten	Alsco Anaconda
05	Marietta	Van Dale Junkyard
05	Dayton	Sanitary Landfill Co. (IWD)
05	Elyria	Republic Steel Corp. Quarry

OREGON

EPA REGION	CITY/COUNTY	SITE NAME
10	The Dalles	Martin-Marietta Aluminum, Inc.

PENNSYLVANIA

EPA REGION	CITY/COUNTY	SITE NAME
03	Gettysburg	Hunterstown Road Lagoon and Drums V
03	Valley Township	Domino Salvage Yard
03	Myerstown	Whitmoyer Laboratories
03	Gettysburg	Shriver's Corner Drums
03	Gettysburg	Westinghouse Elevator Co. Plant
03	Shoemakersville	Brown's Battery Breaking
03	Middletown	Middletown Air Field

03	Ambler	Ambler Asbestos Piles
03	Lower Windsor Twp.	Modern Sanitation Landfill

RHODE ISLAND

EPA REGION	CITY/COUNTY	SITE NAME
01	Johnston	Central Landfill

TENNESSEE

EPA REGION	CITY/COUNTY	SITE NAME
04	Jackson	American Creosote

TEXAS

EPA REGION	CITY/COUNTY	SITE NAME
06	Bridge City	Bailey Waste Disposal
06	Friendswood	Brio Refining, Inc.
06	Waskom	Stewco, Inc.
06	Odessa	Andrews Highway Ground Water Contam.
06	Odessa	Odessa Chromium #1
06	Houston	Sol Lynn/Industrial Transformers
06	Houston	South Cavalcade Street
06	Houston	North Cavalcade Street
06	Crystal City	Crystal City Airport
06	Texarkana	Koppers Co. (Texarkana Plant)
06	Liberty County	Petro-Chemical (Turtle Bayou)
06	Fort Worth	Pesses Chemical Co.

UTAH

EPA REGION	CITY/COUNTY	SITE NAME
08	Midvale	Sharon Steel (Midvale Smelter)
08	Salt Lake City	Portland Cement (Kiln Dust 2 & 3)
08	Wasatch County	Mayflower Mountain Tailings Ponds
08	Monticello	Monticello Rad Contamination Props
08	Wasatch County	Olson/Neihart Reservoir

VIRGINIA

EPA REGION	CITY/COUNTY	SITE NAME
03	Culpeper	Culpeper Wood Preservers, Inc.
03	Manassas	IBM Corp. (Manassas Plant Spill)
03	Front Royal	Avtex Fibers, Inc.

03	Fredericksburg	L.A. Clarke & Son
03	Winchester	Rhinehart Tire Fire Dump

WASHINGTON

EPA REGION	CITY/COUNTY	SITE NAME
10	Kent	Midway Landfill
10	Renton	Quendall Terminal
10	Brush Prairie	Toftdahl Drums
10	Mica	Mica Landfill
10	Everson	Northwest Transformer
10	Loomis	Silver Mountain Mine
10	Spokane	Northside Landfill

WEST VIRGINIA

EPA REGION	CITY/COUNTY	SITE NAME
03	New Martinsville	Mobay Chemical (New Martinsville)
03	Morgantown	Morgantown PCB Site

WISCONSIN

EPA REGION	CITY/COUNTY	SITE NAME
05	Eau Claire	National Presto Industries. Inc.
05	Stoughton	Stoughton City Landfill
05	Franklin	Fadrowski Drum Disposal

STATEMENT OF J. BURGESS WINTER, SENIOR VICE PRESIDENT, OPERATIONS, KENNECOTT, SALT LAKE CITY, UT

Mr. WINTER. Thank you, Mr. Chairman and members of the committee. My name is Burgess Winter. I am senior vice president of operations for Kennecott, the Nation's largest copper producer, with operations in six States. I have submitted written testimony to this committee to substantiate our opinion that to tax copper metal under the Superfund bill would be very wrong. And I would like to reiterate a few simple facts in support of that. The copper industry has spent enormous amounts of money in environmental capital over the last few years. Kennecott itself has spent $750 million in environmental capital to comply with the Clean Air Act, Clean Water Act, OSHA, et cetera. The industry has also spent tremendous moneys to modernize their plants, to increase productivity, and to help make the copper industry more competitive in the international markets. Kennecott has spent over $1 billion to modernize their plants to achieve this reduced production cost. We are very proud of our environmental record. We have an excellent record, and we have reduced our production costs over 30 percent in the last few years. We think this is a great achievement. Nevertheless, we and the rest of the copper industry are in very serious financial trouble. We have been for the last few years due to the depressed copper price. This is caused mainly by the importation of subsidized foreign government owned copper. Copper is not a toxic material. It is inert and benign. We all use copper in our houses, copper pipes to transport our drinking water. We have copper coins in our pockets. We cook with copper pots and pans. I wear a copper bracelet which is guaranteed to cure my tennis elbow. And there are no toxicity reasons why copper should be included in any form of Superfund tax. If a tax is placed on copper, it will be an economic disaster, and I believe that we will be putting a nail—one of the last nails—in the copper industry—in the coffin. And I recommend that copper and mining wastes in general be excluded from the fund.

The CHAIRMAN. Mr. Bauer.

[Mr. Winter's prepared written statement follows:]

TESTIMONY OF KENNECOTT
BEFORE THE
SENATE FINANCE COMMITTEE
ON
SUPERFUND REAUTHORIZATION

J. BURGESS WINTER
SENIOR VICE PRESIDENT OF OPERATIONS
SEPTEMBER 21, 1984

Mr. Chairman and Members of the Committee, my name is Burgess Winter. I am Senior Vice President of Operations for Kennecott in Salt Lake City, Utah. We appreciate the opportunity to provide our thoughts to this Committee as you continue your deliberations on reauthorization of the 1980 Superfund law.

Copper Industry Status

Kennecott has testified before many Committees of Congress in the past, and on a variety of topics. Usually Kennecott has testified from a position of strength as the largest copper producer in the U.S., frequently the world, and has had a proud story to tell of high employment and good profitability at its many mines, mills, smelters, and refineries in six states. Payrolls of over $300 million annually and local, state and federal taxes of over $100 million per annum, have all been contributed from a workforce of over 15,000 personnel.

It is with no great pride that I testify before you today, as a representative of a domestic copper company that is part of an industry in serious decline.

The U.S. copper industry has lost $2.1 billion since 1981. During the economic recession in 1982, the copper price fell in real terms to its lowest level since the Great Depression. Since 1982, as you know, the U.S. economy has rebounded with strong growth and many industries are experiencing excellent corporate profits. However, even though domestic copper consumption has increased with the Nation's economic recovery - - as is expected with more homebuilding, automobile sales, and other areas where copper is used -- the price of copper has not rebounded. In fact, despite continuing production curtailments by the domestic copper industry, the price of copper has remained at severely depressed levels. The major reasons why the copper price is low, and may continue to remain low in the foreseeable future, lie in the excess world copper supply caused by ever-increasing and often subsidized production from government-owned foreign producers, and the continued strength of the U.S. dollar compared to other foreign currencies, a consequence in part of high U.S. interest rates.

In response to the past three years of depressed copper price, the U.S. copper industry has shut down many operating properties. Mine production capacity in the U.S. in 1981 was 1,900,000 tons per annum of copper. Since then, temporary closures of 650,000 (34%) and permanent closures of 250,000 (13%) have been experienced. More than 20,000 jobs of the 40,000 jobs in the domestic industry have been lost.

Kennecott facilities in Nevada, Maryland and Missouri are closed; Arizona and New Mexico have substantially curtailed production. The Utah copper division, with capacity in excess of 200,000 tons of copper per annum, has reduced production by two thirds, and the labor force has been reduced from 7,000 in 1981 to 2,000 at present. In total, Kennecott's labor force has been reduced from over 15,000 in 1980 to less than 4,500 today.

Kennecott's workforce has now been trimmed to barebones, with corporate staff and operations personnel cut drastically. The resultant configuration is a lean, highly efficient domestic copper company. Even though production costs have been cut by 30%, the continuing low copper price has more than offset the economic benefits of these efficiency gains. This year, Kennecott is anticipating a loss of $150 million.

Gentlemen, simply stated, the strategically vital domestic copper industry is facing severe economic hardship. Any governmental action which places further financial burdens on our industry is entirely inappropriate.

Impact of House Superfund Bill (H.R.5640)

On August 10, 1984, the U.S. House of Representatives passed its version of the Superfund reauthorization bill (H.R.5640). The acceptance of this bill as law will expand Superfund from $1.6 billion to $10.2 billion over the next five years. To raise the additional funds to clean up hazardous waste sites, the House bill provides for a 10 fold increase in the tax on crude oil and adds an additional 20 chemicals and metals to the list of taxable materials. For the first time, Superfund has been expanded to include certain non-toxic primary metals. The new list includes copper, a metal whose non-toxicity has been well established and confirmed through 6,000 years of recorded use.

A. Non-Toxic Copper Metal Should Not Be Included In Superfund.

Copper metal, as you know, is utilized throughout our homes to carry water, for cookware, electrical wiring, jewelry, coinage and is essential for human metabolism. In addition, our Nation depends on copper metal in its industrial operations, and for critical strategic applications.

In 1980 Congress reviewed whether copper metal should be taxed under Superfund. After a careful review of the non-toxic nature of copper metal, Congress rejected such a tax, and instead placed a tax on certain copper compounds when sold or used outside of the metal making process. In 1984, the House Energy and Commerce Committee, and the Senate Environment and Public Works Committee, both again rejected the taxation of copper metal under Superfund. The only Committee where copper metal has been included for taxation was the House Ways and Means Committee during their brief one day mark-up for the purpose of raising an additional $1.2 billion above the $9 billion specified by the Energy and Commerce Committee. The issue of the appropriateness of the tax in relation to copper toxicity or the impact of such a tax on the viability of the domestic industry was never discussed.

At the 881 potentially hazardous sites evaluated by EPA, it has been reported that at 68 sites "copper and copper compounds, not otherwise specified" have been found. However, upon careful evaluation, it is clearly evident that only copper compounds were found and not copper metal. In fact, none of the 68 sites list copper metal itself as being present or causing any environmental harm.

If the thrust of this law is to address compounds of copper. one should observe that copper metal itself is not produced or sold for the production of copper chemical compounds, nor used for any toxic chemical applications.

In light of the above, we urge this Committee to keep copper metal and other non-toxic metals free from any feedstock tax.

B. Economic Impact of a Feedstock Tax on Copper

While Kennecott fully supports the need for cleanup of abandoned sites, we believe that a $30 per ton tax on copper metal is both inequitable and inappropriate. Such a $30/ton feedstock tax as proposed in H.R. 5640 would:

- Place an enormous and unilateral burden on the domestic copper industry which, as I have already indicated, is having extreme difficulty competing with foreign government-owned and subsidized producers.
- Cost the domestic copper industry over $300 million over 5 years, and Kennecott in the range of $12 to $16 million a year.
- Be impossible for domestic copper producers to pass on to the ultimate consumer because the price of copper is set by worldwide supply and demand, thereby leading to further erosion of the domestic market.
- Put copper at a market disadvantage relative to aluminum, copper's chief competitor. Copper and aluminum metals are both non-toxic and should not be taxed under Superfund.

- Place the domestic copper fabricating industry, which employs over 110,000 persons, at a major competitive disadvantage relative to imported copper fabricated products. Because of the tax on primary metal imports, the importation of untaxed fabricated products would increase substantially.
- Be placed on copper metal which is inert, non-toxic, and such a vital part of our everyday life.

C. A Waste End Tax is Inappropriate, Especially For The Mining Industry

Kennecott is concerned that consideration is being given to a "waste-end tax" on mining. The concept of a "waste-end tax" was derived from industries which generate small volumes of highly toxic waste. The mining industry generates huge quantities of low toxicity waste. For example, in the production of copper, 600 tons of material are moved for each ton of refined copper produced. Historically, Kennecott alone has moved over 600,000 tons of material a day. Since this material is retained in a natural state, and is merely moved from one location to another during the mining process, we are opposed to its' inclusion in any waste-end tax.

Congress, under the Solid Waste Disposal Act (Section 8002), has requested EPA to evaluate whether mining wastes should be regulated. Therefore, imposition of any waste-end tax on the mining industry should be deferred until completion and evaluation of these studies (expected in early 1985).

Kennecott considers that the concept of a waste-end tax under Superfund is wrong, since it:

- Is not needed:
  - EPA's projected funding requirements do not justify a waste-end tax.
  - RCRA already provides incentives to reduce waste generation and requires environmentally sound disposal.
- Would hurt U.S. Trade:
  - Domestic manufacturers would be harmed by foreign competition, since a comparable waste-end tax on foreign imported products is difficult/infeasible.
- Is an inappropriate use of taxing authority:
  - The tax would be inequitable unless based upon degree of waste hazard.

  - Does not take into account the environmental merits of the waste disposal method selected.

- Adversely impacts the RCRA program:
  - Increases the incentive to seek delisting, thereby slowing EPA enforcement.
  - May result in under-reporting or illicit disposal.

- Would be costly to administer:
  - States have experienced high administrative costs compared to revenue raised.
  - Increases compliance costs on industrial operations for which the consumer pays.
  - Proper enforcement by Federal/State or local agencies would be difficult.

- Is unreliable:
  - Tax base would erode due to alternate waste management methods or other forms of tax avoidance.
  - States have experienced significant shortfalls in projected waste-end tax revenue.
  - Changes to RCRA regulations would alter the tax base.

Conclusion

To tax copper metal in any way to generate revenue for the cleaning up of hazardous waste sites would be wrong, since (1) copper is non-toxic, (2) such a tax would be burdensome in view of the international nature of the copper business, and (3) the copper industry is currently undergoing severe economic problems. Therefore, we do not believe it would be to the advantage of the U.S. to jeopardize further the economic viability of the copper industry, which is strategic and basic.

What may be appropriate for a $1.6 billion fund, does not necessarily make sense for a much larger fund. As a matter of principle, we believe that the size of the Superfund should be more accurately tailored to projected needs.

In view of the enormous cost of the fund projected for the future, we believe alternative taxing structures should be critically reviewed.

COPPER
AND
SUPERFUND

Kennecott
P.O. Box 11248
Salt Lake City, Utah 84147

September, 1984

ISSUE SUMMARY:

KEY ELEMENTS OF KENNECOTT'S POSITION ON THE SUPERFUND EXPANSION AND PROTECTION ACT OF 1984 (H.R. 5640) AND RELATED MATTERS

- Copper and zinc metal should be removed from the list of substances subject to the "feedstock" tax in H.R. 5640. The metals themselves are environmentally benign as are the downstream operations (e.g., production of alloys, fabrication of consumer products that use these metals). There is no reason to regard these as feedstocks which produce significant environmental impacts. Certain copper compounds (i.e., cupric oxide, cupric sulfate, cuprous oxide) are classified as hazardous, but these are already subject to feedstock taxes.

- Kennecott is opposed to a waste-end tax because such a tax would be inequitable, unreliable as a source of revenue, offer perverse incentives for illicit waste disposal, and difficult to implement in practice. A waste-end tax would offer an unfair significant competitive advantage to foreign products.

- Before Congress takes any action on a waste end tax, it is appropriate to evaluate the unique situation of the non-ferrous mining and metals industries which generate large volumes of low-toxicity wastes, as compared to other industries. Any decision on a waste end tax should await completion of the RCRA-mandated mine waste study, now being conducted by EPA.

- Sulfuric acid produced solely as a by-product of mandated pollution controls, is exempt from feedstock taxes under both the current Superfund Law and H.R. 5640. It is important that this exemption be retained, otherwise, non-ferrous smelters would be doubly burdened.

- H.R. 5640 does not impose any tax on "intermediate process chemicals" as has been proposed by the IRS. Intermediate process chemicals are compounds that are produced on a transitory basis incidental to the production of the final product. It was not the intent of Congress to tax such compounds when the original CERCLA legislation was passed. It should be made explicit in H.R. 5640 that the IRS is not being given the authority to tax in-process chemicals in the metals extraction and refining process.

- H.R. 5640 redefines the terms "pollutant or contaminant" in such broad terms which can cover practically any material in existence. The bill then exacerbates the broad perspective by inserting the term "pollutant or contaminant" in every key section where the term "hazardous substance" is used with the end result that innocuous substances become classified at the same priority level as valid hazardous substances. Kennecott believes that this expanded coverage works at cross purposes to the valid intent of the Superfund Law, i.e., to clean up truly hazardous waste sites which are causing proven detrimental effects to human health and the environment. Such imprecision is likely to lead to a misallocation of limited Superfund resources.

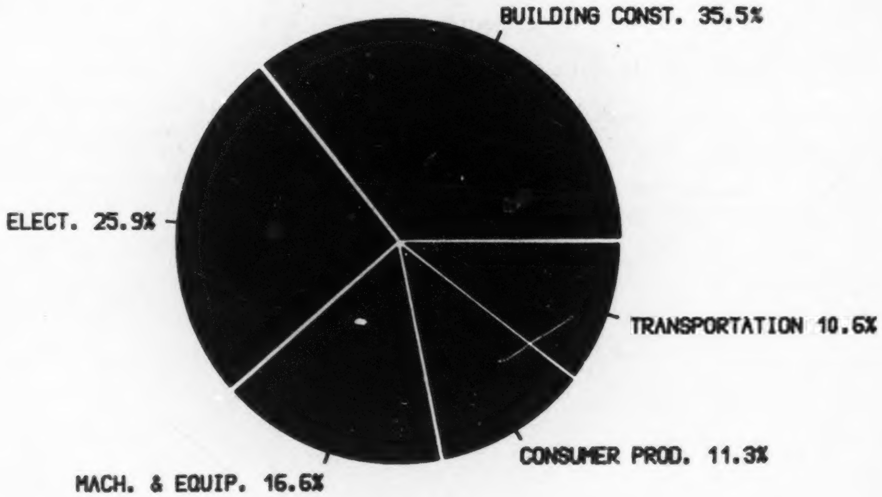
USES OF COPPER

The United States is the largest consumer of copper in the world, accounting for nearly 2 million tons or about 25.9% of western world refined copper consumption in 1983. On a per capita basis, U.S. consumption of refined copper was about 17.1 lbs. Inclusion of copper scrap (recovered from a variety of sources) raises this total to 24.8 lbs./capita — among the highest in the world.

Copper metal is not directly used by consumers, but rather used to produce a variety of consumer goods. As the attached exhibit shows, building construction is the largest end use sector for copper, accounting for about 35.5% of total domestic 1983 consumption. Illustrative products in this category are plumbing, brass fittings, water heaters, wire, etc. Other major consumption categories and their 1983 share of market include electrical and electronic products (e.g., wiring, power cables, motors, generators, etc.), 25.9%; industrial machinery and equipment (e.g., valves and fittings, pumps, air conditioning, etc.), 16.6%; consumer and general products (e.g., washing machines, refrigerators, etc.), 11.3%; and transportation (e.g., auto radiators, cable harnesses, starter motors, ship propellers, etc.), 10.6%.

Copper is also used for military purposes by the defense industries. In unalloyed form, it is used as a conductor in electrical and electronic apparatus. Brass and cupronickel alloy tube are used for condenser and water lines in ships. In alloyed form, it is used in cartridge and shell cases and other ammunition components. Over the past 30 years, military demand for copper base mill and foundry products has averaged about 5% of shipments, but fluctuated substantially from 1.2% to 17.6% of shipments. Periods of high military demand in recent years include 1952-1953 at the height of the Korean War rearmament and 1966-1970 as a result of US involvement in Vietnam.

DOMESTIC COPPER CONSUMPTION BY BROAD END USE CATEGORIES IN 1983



SOURCE: COPPER DEVELOPMENT ASSOCIATION ANNUAL DATA 1984. NOTE THAT SCRAP COPPER IS INCLUDED IN THESE TOTALS

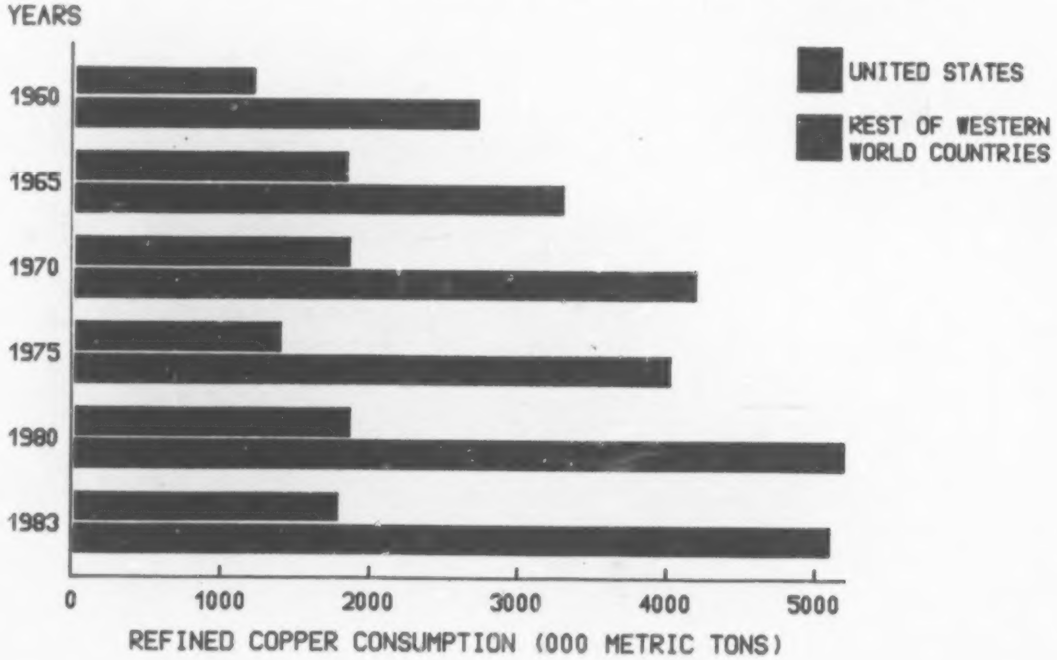
COPPER CONSUMPTION GROWTH RATES

Copper consumption varies from country to country as a function of its level of economic activity and stage in the cycle of development. For example, major increases in copper consumption take place when a country embarks on electrification projects, which require substantial quantities of copper as occurred in the United States early in the twentieth century. As a country becomes more fully developed, the copper intensity-of-use, measured by the copper consumption per dollar of real gross national product, tends to decrease causing the overall rate of growth of consumption of copper to fall.

The attached exhibit shows refined copper consumption for the United States and the rest of the western world from 1960 to 1983. Over this period copper consumption in the United States grew at a compound annual average rate of 1.65% per year, whereas consumption in the rest of the western world grew at 2.75% per year. Countries with particularly high rates of growth in recent years include Japan, Brazil, Mexico, the Asian LDCs and countries with centrally planned economies.

Factors which tend to lower the growth rate of copper consumption include economization in the use of copper (e.g., thinner walled copper tubing and lighter car radiators), substitution by alternative materials (e.g., aluminum for copper in power cables, copper for lead in water pipes), and the development of new technology that is less copper intensive (e.g., optical fibers instead of copper telephone cables).

REFINED COPPER CONSUMPTION IN THE UNITED STATES AND IN THE REST OF THE WESTERN WORLD FROM 1960 TO THE PRESENT SHOWS DIFFERING GROWTH RATES



SOURCE: METALLGESELLSCHAFT

PER CAPITA CONSUMPTION OF REFINED COPPER BY COUNTRY

Country	1983 Refined Consumption (000 Short Tons)	Estimated Population (1981) (Millions)	Per Capita Refined Copper Consumption (Lbs/Capita)
Belgium	277.7	9.86	56.33
Sweden	124.6	8.32	29.95
Finland	66.0	4.80	27.50
Japan	1,508.6	117.65	25.65
Germany, F.R.	786.8	61.67	25.52
Canada	215.0	24.34	17.67
Australia	131.1	14.86	17.64
United States	1,968.9	229.81	17.14
France	429.0	53.96	15.90
United Kingdom	394.7	55.84*	14.14
Italy	373.4	57.20	13.06
Yugoslavia	140.9	22.52	12.51
Taiwan	108.9	18.8	11.59
South Korea	161.4	41.3	7.82
Spain	136.2	37.65	7.24
Austria	23.5	7.51	6.26
South Africa	80.0	30.13	5.31
Chile	25.0	11.29	4.43
Netherlands	31.4	14.25	4.41
Greece	19.5	9.71	4.02
Argentina	52.9	28.09	3.77
Norway	7.2	4.10	3.51
Portugal	15.3	9.93	3.08
Switzerland	9.1	6.47*	2.81
Brazil	170.0	121.55	2.78
Mexico	97.1	71.19	2.73
Turkey	39.7	45.37	1.75
Zimbabwe	6.6	7.60	1.74
Peru	15.0	18.28	1.64
Algeria	7.9	19.59*	0.81
New Zealand	1.0	3.13	0.64
Denmark	1.3	5.12	0.51
Zambia	1.5	5.96	0.50
Egypt	8.8	43.47	0.40
India	97.3	676.22	0.29
Indonesia	20.0	150.52	0.27
Iran	4.0	39.32*	0.20
Philippines	4.9	49.53	0.20
Zaire	1.0	28.38**	0.07

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* Mid-year estimates.

** Lastest available figures are for 1980.

PRODUCTION PROCESS FOR COPPER

Primary copper is produced in a four-stage process of mining, milling, smelting, and refining.[1] Refined copper is then shipped to semifabricators where the metal is rolled, drawn, or extruded into useful shapes for final fabrication.

Copper Ore

Most of the copper ore in the United States contains various sulfides of copper in association with other elements. Of these sulfides, chalcopyrite ($CuFeS_2$), chalcocite (Cu_2S), and bornite (Cu_5FeS_4) are the most prevalent in western US copper mines. The domestic sulfide copper ores are usually found at a concentration (grade) of one percent or less. Because of the low grade ore and its mineralization near the surface, most US copper mines employ large-scale open-pit mining methods. Indeed, open-pit copper mines are among the largest of domestic metal and non-metal mines in the United States. Based on output of crude ore, thirteen of the largest twenty-five US mines are copper mines, and eleven of the twenty mines of size greater than 10 million tons per year are copper mines. The average recoverable copper content of the ore in recent years has been slightly above 0.5%; a ton of domestic ore thus contains a little more than 10 pounds of copper metal. The grade of ore is an important determinant of the economic viability of mining. For a fixed metal price, as the ore grade decreases, the costs of mining increases, ultimately reaching a point where production costs equal revenues. Mining ore beneath this cut-off grade means that costs will be greater than revenues — mining becomes uneconomic. The cut-off grade depends upon both the refined metal price and mining costs and other treatment charges. If prices increase, the cut-off grade decreases; if costs or treatment charges increase, the cut-off grade likewise increases and the economically minable reserves decrease.

Mining Process

Presently, about 90% of the domestic copper ore is produced by open-pit methods. Mining methods are generally similar in all open-pit copper mines. The mine is prepared for ore removal by means of an overburden stripping operation. This operation results in the preparation of a series of working benches from 25 to 60 feet high leading into the pit. Haul roads interconnect the working benches. The stripping process has an ongoing requirement to maintain access to the ore body itself.

The sequence of operations at an open-pit mine is drilling - blasting - loading and hauling. After blasting, haulage units are loaded using large shovels. Before World War II, these haulage units were typically railroad cars, however, diesel-powered trucks of size 30 tons to 250 tons are currently used for hauling. As a mine is developed and the pit is enlarged and deepened, haul distances for both ore and waste movement tend to increase with subsequent increase in mining costs. Additionally, the ratio of waste to ore may also increase with depth further increasing mining costs. Open-pit mines' depth can extend to as much as 1500 feet below the pit rim.

Copper ore is hauled or conveyed to the concentrator or mill for the next stage in the production process. The overburden or waste is usually placed on the outer periphery of the mine. Some of the waste which is low-grade ore is leached by allowing water to percolate through the material for copper recovery. These copper-bearing solutions are directed by way of collection basins, open channels, or launders to precipitation vessels where metallic iron is added. The iron displaces the copper from solution to produce a metallic-copper precipitate (also termed cement copper and contains about 80% copper) and a spent iron-bearing solution. The precipitate copper is filtered, dried, and delivered to the smelter for further treatment. The solution is then recirculated to the leaching areas.

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[1] A small but growing amount is produced by hydrometallurgical processes, including leaching, precipitation, smelting, refining; or leaching, solvent extraction.

Ore Beneficiation or Concentration

The second major stage in production of primary copper is ore beneficiation or, as it is sometimes called, concentration or milling. The input to this stage is copper ore and the useful output is called concentrate, a material normally containing 20% or more copper in its sulfide form. From 60 to 90% of the copper is recovered in this step. The remainder is lost in the tailing which is discharged to storage ponds near the concentrator.

In the concentrating step, the ore is treated in a series of beneficiation processes to separate the sulfide minerals from the unwanted earth materials. First, the ore is dumped to the coarse or primary crushers. The crushed material is fed into the grinding circuit where the ore, mixed with water, is further pulverized in rotating ball or rod mills. The very fine ore is then fed into flotation cells for separation of the copper minerals. Various reagents are added preceding the flotation process to coat the copper-bearing mineral particles and encapsultate them in a froth, while depressing other unwanted minerals in the ore. The flotation cells are agitated and aerated continually so that the copper sulfide minerals collect in the froth and flow out of the cells. The non-mineral-bearing material discharges from the bottom of the cells as tailings which are conveyed through pipes or launders to disposal areas called tailing ponds. In addition to copper, the concentrated sulfide material may contain by-product minerals such as molybednite (MoS_2). These may be separated by additional flotation before the final copper concentrate is dewatered and transported to the smelter for further processing. The composition of copper concentrates commonly is 20 to 30% copper along with sulfur and iron in approximately the same amounts.

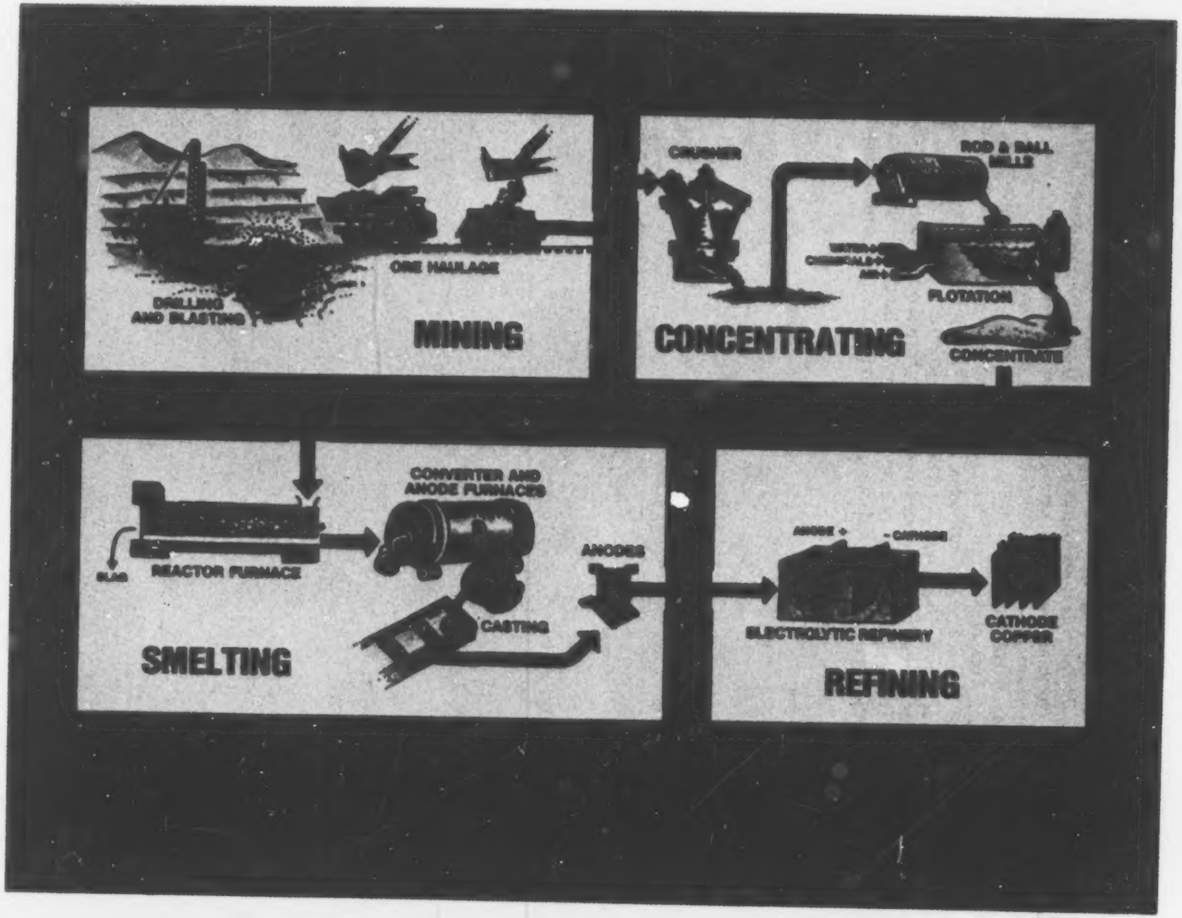
Smelting

The third stage in primary copper production is smelting. Smelters perform the function of removing the iron, sulfur, and other metal impurities from the copper sulfide concentrate. The historical or conventional smelting process consists of: (1) mixing raw concentrates with flux materials (silica) which assist in the smelting process; (2) smelting the raw or roasted material in reverberatory furnaces to form copper matte; (3) converting the matte to produce blister copper, (4) removal of additional impurities in the blister copper in refining furnaces, and (5) casting of the copper in anode shapes.

In conventional smelting, the copper concentrates are melted in large furnaces at a temperature of about 2700 degrees Fahrenheit. Part of the sulfur reacts with the copper and iron to form copper matte, a compound containing 35-75% copper (depending on the smelting technology employed), iron and sulfur; the remainder is oxidized to sulfur dioxide (SO_2) gas. The other impurities react with the iron and the flux materials to form an iron silicate slag which floats on top of the matte and is skimmed for discard. The molten matte is transferred to converters where air is blown into the bath to oxidize the sulfur. The sulfur is removed as sulfur dioxide gas. Silica flux is also added to form a slag with the remaining iron and impurities. The product of the converting step is blister copper (98-99% pure). The sulfur dioxide gas is collected for production of sulfuric acid. The blister copper is further purified either with specific fluxes or reducing agents to make anode copper of approximately 98.5% to 99.6% purity as feed to electrolytic refining.

Electrolytic Refining

In the electrolytic refining operation, the anode copper shapes (typically in 30" x 40" shapes from 1" to 2" thick and weighing 500 to 1000 pounds) are placed in tanks with "starter" sheets of cathode copper in an electrolyte of sulfuric acid and dissolved copper. An electric current is passed through the tanks and copper ions migrate from the anode to the cathode. After an electrolytic cycle of up to 14 days, the final cathode product is removed. The anode remnants are removed, washed, and scrapped for remelting in an anode furnace. The cathodes, about 99.9% pure copper, are melted and cast into rod wirebars, ingots, ingot bars, or billets for shipment to fabricators. Precious metals and other impurities in the anodes are precipitated as "anode mud" or "anode slime" in the tank. These slimes are processed (further refined) to recover certain by-product metals, including gold, silver, platinum, palladium, selenium, and tellurium.


MINING
DRILLING AND BLASTING
ORE HAULAGE
CONCENTRATING
CRUSHER
ROD & BALL MILLS
WATER
CHEMICALS
AIR
FLOTATION
CONCENTRATE
SMELTING
REACTOR FURNACE
SLAG
CONVERTER AND ANODE FURNACES
CASTING
ANODES
REFINING
ANODE +
- CATHODE
ELECTROLYTIC REFINERY
CATHODE COPPER

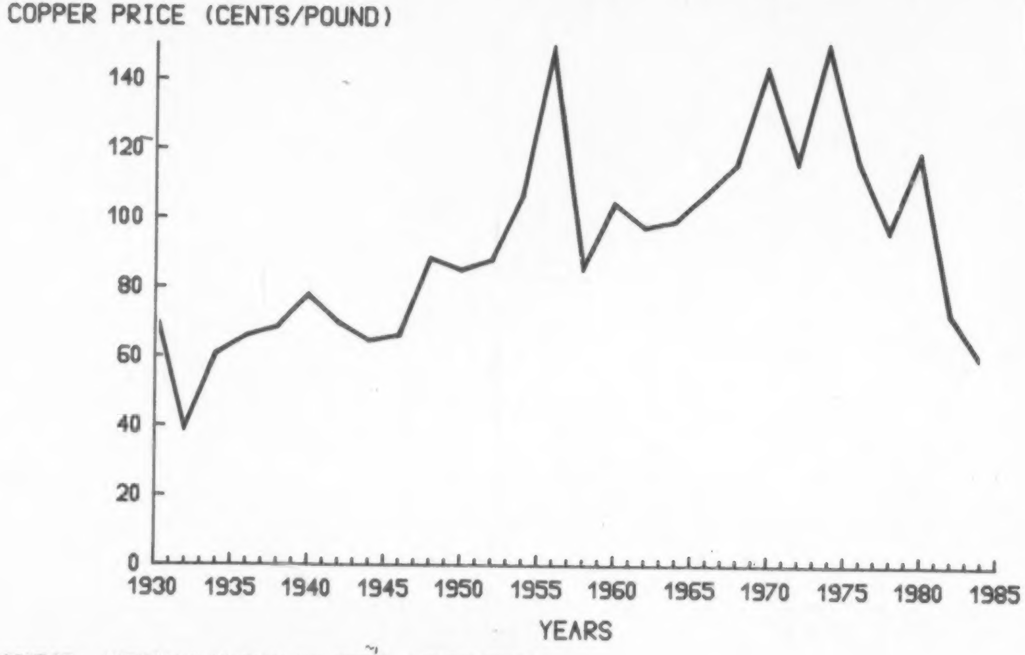
COPPER PRICE & PRODUCTION LEVELS

Copper is a fungible commodity that is traded on various exchanges throughout the world. Prices are determined by the world balance of supply and demand and not by individual producers.

For this reason (absent tariff barriers, quotas or other impediments) copper producers cannot pass through cost increases occasioned by, for example, the imposition of environmental controls or taxes in the United States. These costs must be borne by the affected producers, a situation that differs substantially from many other industries, such as electric utilities.

As the attached exhibit shows, copper prices have fallen to their lowest levels in real terms since the great depression of the nineteen thirties (Chileans claim the lowest real price level since the French Revolution). Such low price levels are strong evidence of the overproduction that has displaced the traditional balance between copper supply and demand. Producers did not adjust supply to meet the reduced demand occasioned by the recent recession. Third world producers, in particular those belonging to the Intergovernmental Council of Copper Exporting Countries (CIPEC including Chile, Peru, Zaire and Zambia), attempted to compensate for lowered export revenues (brought about by falling prices) by increasing output -- which only exacerbated the oversupply condition of the market and caused prices to fall further. Between 1981 and 1983, for example, western world copper mine production (excluding the CIPEC nations) decreased by 17.7%, whereas mine output from the CIPEC countries increased by 9.8% and Chile's output by 16.3%. But, on balance, the market remained in oversupply with depressed prices the inevitable result. At current prices only a handful of the world's copper mines can cover operating costs.

SINCE 1982 REAL COPPER PRICES HAVE DECLINED TO
LEVELS PERILOUSLY CLOSE TO THOSE OF THE GREAT
DEPRESSION--DRAMATIC EVIDENCE OF OVERPRODUCTION



SOURCE: AMERICAN BUREAU OF METAL STATISTICS
(Copper Prices Expressed In $1982 Normalized
By The Consumer Price Index)

ORE GRADES

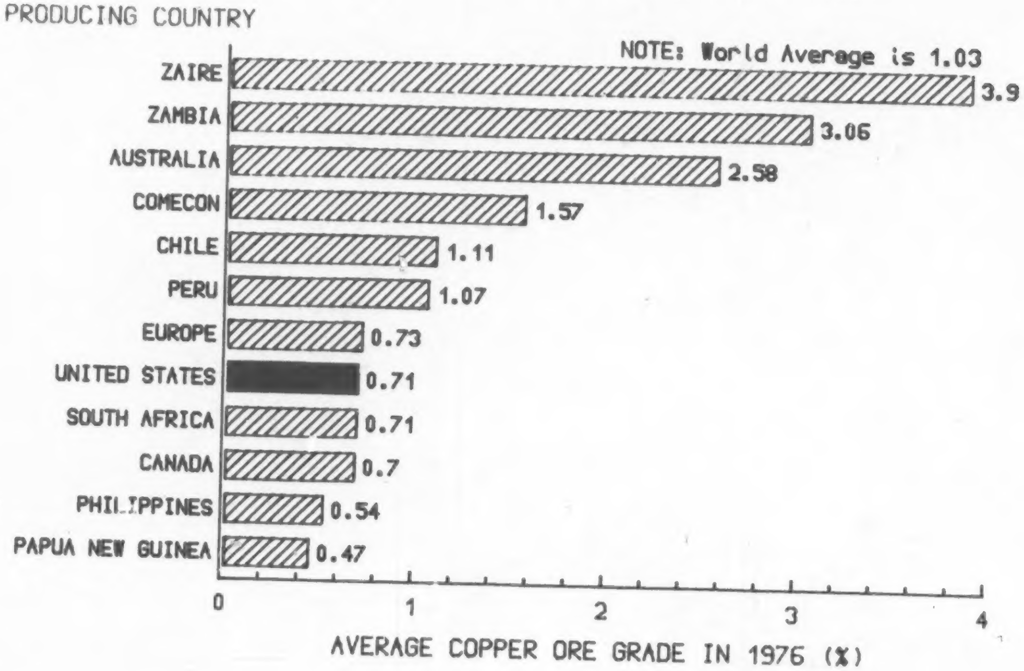
As the attached exhibit shows, ore grades (the percent copper in the copper ore being mined) are about 30% beneath the world average, and substantially beneath those of the countries which compete with U.S. producers for the domestic market.

Coupled with labor costs that are among the world's highest and substantial environmental costs, this creates a formidable challenge to the continued viability of the domestic copper industry. The U.S. industry has been able to overcome these competitive disadvantages by making efficiency gains in the mining and processing sectors, such as a virtually unequalled productivity in materials handling.

The exhibit on ore goods also highlights an important point relevant in connection with the debate on the suitability of a waste-end tax for the non-ferrous mining industry. One of the advantages of a waste-end tax in principle is that it offers an economic incentive to increase recovery in industrial and chemical processes and thereby reduce waste volumes. In the case of copper mining, the grade of the ore defines a lower limit on the quantity of mining wastes produced per unit of product. No economic incentive can change an artifact of nature, and increase domestic ore grades.

As for economic incentives, the low grade of U.S. copper ores furnish a powerful incentive to increase recoveries and minimize wastes. Since the introduction of froth flotation the domestic copper industry has made substantial improvements in copper recovery -- even to collecting and recycling copper-containing flue dusts. No added "incentives" are necessary.

UNITED STATES COPPER ORE GRADES ARE SIGNIFICANTLY BENEATH THE WORLD AVERAGE AND THOSE OF MAJOR PRODUCING COUNTRIES



SOURCE: USBM.

PROFITABILITY OF THE COPPER MINING & METALS INDUSTRIES

Squeezed by falling world prices brought about by overproduction by third world producers on the one hand and operating costs that have been inflated by government-mandated environmental controls on the other hand, U.S. copper producers have suffered mounting losses which threaten the viability of the industry.

U.S. producers have closed unprofitable facilities, reduced its labor force, and instituted other cost-reduction schemes designed to stem the risking tide of red ink. Of the 1.9 million tons of U.S. mine capacity in 1981, our analysis indicates that 250 thousand tons or 13% of capacity has been permanently shut down. Of the remaining 1.65 million tons of capacity, only about 1.0 million tons or 60% is currently producing. The net result has been losses in excess of 20,000 jobs, about half the work force, in the last three years.

These attempts to control cost have led to dramatic reductions in the cost of domestically produced copper. Kennecott's costs, for example, have decreased by more than 30%. But these efficiency improvements have not been sufficient to offset the continued drop in prices. Since 1981 it is estimated that the U.S. copper industry has incurred losses in excess of $2.1 billion. Nor has the non-ferrous metals industry fared appreciably better, as the attached exhibit shows.

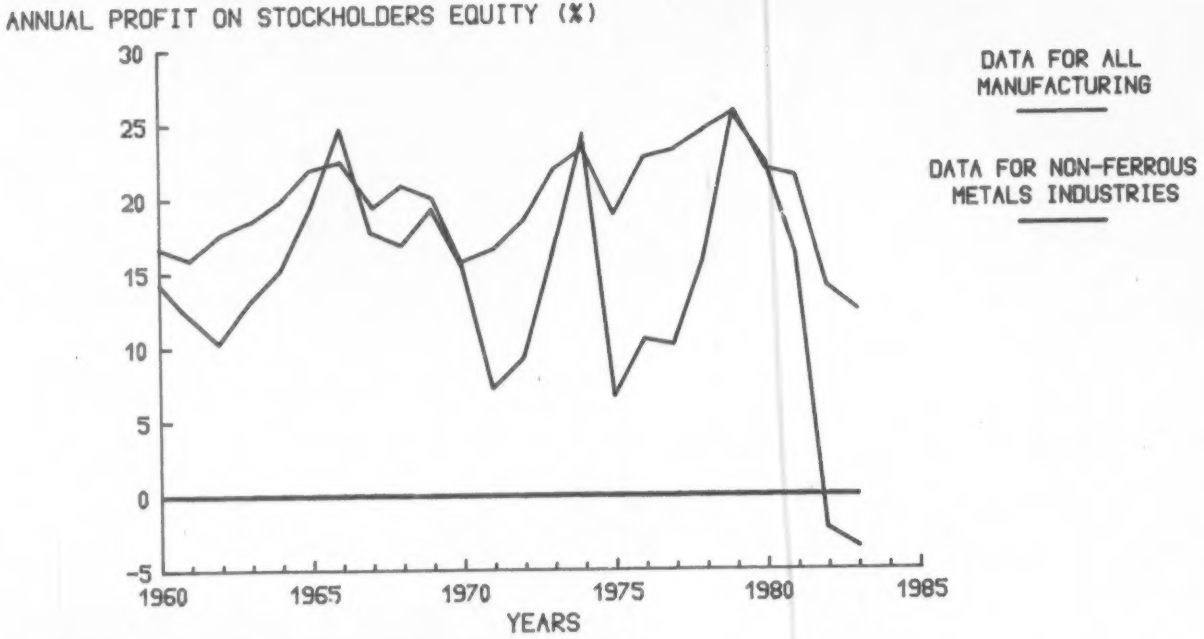
Impact on Kennecott

From mid-1981 through mid-1984, Kennecott has incurred losses of $381 million. Kennecott's various production facilities have been operating at less than full capacity rates. As of July 1, 1984, the operating rates were:

Operating Property	Current Mode of Operation	Operating Rate
Chino Mines (New Mexico)	5-day operation	83%
Ray Mines (Arizona)	smelter and silicate operation closed	
Utah Copper	2/3 shutdown	33%
Baltimore Refinery	tankhouse closed	0%
McGill Smelter (Nevada)	complete shutdown	0%
Ozark Lead (Missouri)	complete shutdown	0%

Kennecott's current work force is about 7,450 less, or 59% lower than at the end of 1980.

COMPARISON OF PROFITS OF NON-FERROUS INDUSTRY & ALL MANUFACTURING SHOWS GROWING DISPARITY SINCE 1970 & THE CURRENT CRISIS IN NON-FERROUS METALS



Figures Are Averages Of FTC Reported Quarterly Returns Except For 1983 (First Quarter Only):
FTC QUARTERLY FINANCIAL REPORT (DIV.& MJR.GP.)

ISSUE SUMMARY:

EFFECTS OF COPPER ON HUMANS AND ANIMALS — A NON-TOXIC SUBSTANCE

Copper, along with some copper compounds, is taxed as a feedstock in H.R. 5640. The rationale for taxation of any material as a feedstock is that subsequent processing operations ("downstream" activities) generate hazardous wastes which are logically subject to taxation. In the case of copper metal, however, subsequent processing activities (e.g., casting, bending, forming, semifabrication, etc.) create minimal environmental impacts. As shown below, the metal itself is environmentally benign — so there is no logical basis for a feedstock tax on copper metal per se. Some copper compounds are classified as hazardous (i.e., cupric oxide, cupric sulfate, and cuprous oxide) and these are appropriately subject to a feedstock tax.

Copper Metal As a Benign Substance

- Used for distribution of drinking water via copper piping systems in households and industry.
- Used in coins and jewelry.
- Used as cookware to avoid metal leaching common with aluminum and iron cookware.
- Used as an intrauterine device in human females as a long-term contraceptive device.
- Used in copper gauze filters in hospital air conditioning units to prevent bacterial growth.
- Used for corrosion resistant applications, electrical wiring, decorative applications.

Copper Compounds

In Humans

- Active copper is one of the most important trace elements in almost all forms of living tissue (animal and vegetable) for maintaining life.
- In the human, no genuine cases of chronic health effects from excess active copper burden have been reported except for a relatively rare congenital disorder known as Wilson's Disease.
- The human body metabolism rejects excess ingested active copper through the natural elimination system or, in the case of a large amount ingested orally, through vomiting.
- Copper related disease is mainly confined to a deficiency of active copper in the body rather than an excess.
- Copper sulfate is often prescribed in high doses to induce vomiting.

- Active copper and its salts are strongly toxic to bacteria, fungi, and parasites, however, remain harmless to man and most animals. Hence, it is beneficial in certain medicinal practices.
- Copper chloride solution has been used as bacteriastat in respiratory therapy apparatus
- Copper sulfate has been used in the treatment of inflammations of mucus membranes.
- Copper compounds have been used in liniments and salves for curing skin infections. The advantage of the active copper is that the copper salts do not produce contact dermatitis or other allergic reactions in humans.
- Active copper in salts, such as copper sulfate, have been used to control scalp infections such as dandruff.
- Active copper in certain compounds is used in chemotherapy in treatment of some types of human cancer.

In Animals

- Ingestion of large doses of active copper salts by most multigastric animals can lead to chronic health effects and possible death, dependent upon dose. (Sheep and dogs are also susceptible at high doses.)
- However, pigs have a very high tolerance for active copper with significant improved growth under a copper feed supplement regimen.

Aquatic Life

- Fish and aquatic life are susceptible to active copper salts and compounds in varying degrees.
- Important parameters of concern are the chemical compound, its solubility and availability to the organism, the species of the organism, the hardness and temperature of the water, the presence or lack of presence of other metals and/or organisms, etc.
- Active copper in form of its salts is used as an algicide for purifying drinking water.
- Copper metal has been used in paints and materials to reduce or prevent fouling of ships and submerged equipment. In the immediate vicinity of the coated surface, a sufficient level of toxicity is available for the specific fouling organisms but not to the detriment of other aquatic life.

But What of the Wastes Generated in the Production of Copper?

Copper mining, milling, smelting, and refining produces high volume but generally low toxicity wastes. It is appropriate to study these wastes and relevant studies are indeed in progress under the Solid Waste Disposal Act. Imposition of any taxes motivated by these concerns should be deferred until completion of the necessary studies when more comprehensive and accurate information is available.

A REVIEW OF COPPER TOXICITY

Kennecott
Salt Lake City, Utah

August 1984

Summary

1. Copper in significant quantities is an essential element for metabolism in plants, animals, and humans.

2. Major copper toxicity is due to a deficiency of the element, in plants, animals, and humans.

3. Human disease from copper excess is found virtually only with genetic problem, suicide attempt, or disturbance in normal anatomy.

4. Copper per se is essentially non-toxic. Toxicity resides with certain copper salts or compounds. These salts in certain circumstances are toxic to fungi, pests, and aquatic biota and are so used to make the environment safer for man, such as for air and water purification.

5. Environmental water criterion for human consumption is not based on human health risk, but on taste. There is no primary drinking water standard for copper.

6. Water, soils, and organisms have intrinsic buffering capacities and detoxification mechanisms that minimize health risks from copper compounds.

7. Critical evaluation of the literature does not identify copper or copper salts as a major toxin in air, drinking water, or soil.

Background

In general, the toxcity of copper arises out of its deficiency in the aquatic, land vegetable, and land animal kingdoms. This is also true of man. Presence of copper or moderate excess of it appears to be beneficial to various degrees. In rare instances, a very great copper excess has occurred with some toxic manifestations only where the reserve for accommodation for the substance has been exhausted.

The National Academy of Sciences 1977 report on copper from its Committee on Medical and Biological Effects on Environmental Pollutants concluded that "mechanisms controlling its absorption, transport, and excretion are so finely tuned that significant clinical manifestations of deficiency or toxicosis are very rare." Likewise,* the EPA in its 1979 Ambient Water Quality Criteria Document on Copper pointed out that as "the homeostasis that exists in humans prevents copper from accumulating . . . , there is much more likelihood of a copper deficiency occurring than of a toxicity developing with current dietary and environmental situations." EPA concluded that copper was non-teratogenic, non-mutagenic, and non-carcinogenic, and that the drinking water standard of 1 mg/l was "below any maximum hazard level, even for special groups at risk." The drinking water guideline was established for taste considerations and not for any health reason.

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*"Copper. Ambient Water Quality Criteria," Criteria and Standards Division. Office of Water Planning and Standards. U.S. Environmental Protection Agency. Washington, D.C.

Copper and Human Health

Copper, a natural element in the earth's crust, is an essential element to humans. The adverse effect of copper in the human is the result of deficiency of the element in the body.

Toxicity from excess copper is rare, since copper is remarkably non-toxic in humans. The few cases of serious toxicity reported have been due to either suicide attempts or application through an abnormal route such as intravenous injection. The human absorption barriers (skin and gut) prevent excessive absorption even in cases of excessive exposure. Moreover, where workers have long exposures to dusts containing copper (mines and smelters), acute or chronic disease from copper exposure does not appear.

An exceedingly rare genetic disease in humans, "Wilson's Disease," results in vastly excessive copper storage. The characteristic degeneration caused by Wilson's Disease, as seen in the liver and central nervous system, has not been documented in any cases of exposure to copper.

The human body comes in contact with copper either as a metal or as a salt (usually copper sulfate). Neither of these have shown chronic human toxicity under ordinary circumstances. Copper metal has been used medicinally for arthritis and for contraception (intra-uterine devices); copper sulfate has been used as an astringent for skin disorders and as an emetic to induce vomiting. Salts of copper are intentionally added to U.S. and foreign water supplies used for drinking purposes, in order to make such water safe for consumption and free of parasites.

EPA Copper Water Criteria

In July 1979, the Environmental Protection Agency (EPA) announced, as part of its Water Quality Criteria for Toxic Substances (Federal Register 44 (144):43666, 1979), freshwater, saltwater, and drinking water criteria for copper. These latter criteria were developed from an EPA Ambient Water Quality Criteria Document on copper, — a document that was widely and heavily criticized as being arbitrary, grossly unscientific, and inappropriate.

The disparity between what was expected from EPA and what emerged was the direct result of insufficient study by EPA within the unrealistic limits set for its assessment. Moreover, the important variables in the above water environments -- i.e., pH, temperature, alkalinity, hardness (magnesium, calcium, carbonate, and other ions), organic ligands, the depth of the water and availability of dissolved oxygen, and other chemical characteristics of a given aquatic locality — may have been unjustifiably simplified by a unifying concept of "copper" toxicity. Actually, various states of cupric or other ions appear involved. The precise manner of their involvement, however, has not been satisfactorily or critically documented in conditions existing in the natural environment and outside of the laboratory.

EPA has recently refined this criteria document with a more careful analysis of the available literature and development of a less restrictive criterion for copper. An oversimplification of the complex interactions still exists, however.

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Ecosystem Buffer Capacity

A effect that was underestimated in studies reviewed by EPA and NAS is the buffering capacity for copper in the natural environment, i.e., an ability of the environment to absorb and accommodate large quantities of chemical forms of copper without substantial harm to aquatic life. Additionally, like the living organism, the inanimate natural environment has its own vast and complex detoxification mechanisms. Molluscs and shrimp appear to store, require, and may accumulate large amounts of copper for physiologic reasons. Reports of high copper content in these species may have failed to account for the organism's biotic buffering capacity. The question why aquatic life in the natural environment thrives in ecosystems with copper levels far above EPA's proposed toxic limits requires further study to establish (1) whether in these cases copper per se is at all toxic or (2) whether a reduction in ambient copper levels in the water studies might, on the other hand, have its own toxic impact.

Copper vs The Cupric Ion

Many inconsistencies on the possible toxicity of copper arise if a clear distinction is not made between copper metal and cupric ion; particularly when it is considered that most of the ascribed toxicity, supported by laboratory systems, appears contingent on the activity of a specific ion, i.e., the cupric ion (Cu^{+2}).

The methods of measurements used, even in cases of environmental indications of cupric toxicity on aquatic life, the actual environmental activities, amounts, and distribution of cupric ions have rarely been precisely documented, except indirectly and possibly with insufficient attention to other variables.

This active cupric ion is not the copper metal which is produced by the copper mining industry nor is the presence of the ion in sea water or given fresh water ecosystems generally directly related to the mining or production of copper metal by the industry.

Copper Deficiency in Plants and Animals

The National Academy of Sciences, in 1977, issued a non-critical document summarizing some of the published data related to the effects of copper in the environment. In animals, copper, which is essential for health and enzyme function, is stored in the liver and the central nervous system as it is in humans. Deficiency of copper in the environment and in food for animals and land plants, is known to cause disease both in animals and plants. In the plant kingdom, the deficiency results in faulty growth, chlorosis (yellowing of leaves), exanthem ("Dieback") of fruit trees, death of apical buds or diseased budding, dwarfing, failure to set seed, and other disorders. When copper sulfate alone, or together with ammonium molybdate, was used as fertilizer in Soviet countries, the yields of crops, such as spring wheat, cotton, Dorset marlgrass, apple trees, corn plants, tobacco, and legumes were reported to be increased.

A pattern in animals, similar to that seen in the plant kingdom, appears to substantiate that a deficiency of copper produces a wide variety of diseases. These include anemia, failure to absorb iron, depressed growth, bone disorders, depigmentation of hair and wool (achromotrichia), depressed reproductive activity, cardiovascular disease and heart failure. Studies continue to be performed to determine how copper in animal diets influences the absorption of the vital trace metals, to avoid these injurious animal diseases in addition to increase growth patterns.

On the other hand, animal disease from increased copper burdens in the body is extremely rare. Up to 15 ppm copper is considered safe in animal feed. Accidental poisoning has occurred in a few cases where inappropriate mineral mixtures have been added. Very rarely, some accumulation in animals have gone as high as 3,000 ppm copper. These animals become ill without fatal effects. Even if meat from such a rare animal was consumed, the doses of copper in the meat which the average man might eat would induce vomiting, but little else, since, at these dose levels, copper is used medicinally as an emetic. This underlines the immense reserve in both the animal kingdom and man for toleration of copper.

Specifically Applied "Toxicity" of Copper Salts

Other cupric compounds and salts are used generally as fertilizers and pesticides (insecticides, fungicides, defouling agents, algicides and molluscicides) because for certain species of pests these compounds have a specific toxicity. In these uses, the compounds have been considered vital for the preservation of safe drinking water, prevention of eutrophication of fresh and saltwater world-wide, prevention of the spread of parasitic disease, protection of crops from pests, and preservation of wood products. One advantage of cupric salts over other compounds in many of these uses appears also to be a direct beneficial effect on the improved quality of the crop, water or wood, in addition to the use for control of the external environmental insults to the crop, water, or wood.

Other cupric salts produced for use by industry are related to that of paint pigments, dyeing and printing, metal refining, photography, vitamin formulations, and dietary supplements. Not only has experience limited the use generally to non-hazardous uses, human contact with the end products have not been reported to produce adverse effects or disease. While sporadic cases of toxicity from mishandling of the chemicals are bound to arise, the effects of copper compounds on designated elements of the human, animal, and vegetative environment appears generally reversible.

Toxicity in Copper Mining and Smelting

In the copper mining process, overburden (earth removed in digging for copper ore) appears to have the same relative toxicity as earth anywhere, and does not provide a case for toxicity or hazard. Copper ore, containing less than 1% copper, once separated from material with less copper, is not toxic in that form. The material with less copper, the overburden stored on site, amounts to a resource awaiting technology and economics to make the extraction of such low-grade copper feasible. Its toxicity appears similar to that of earth.

Similar consideration is given to slag (a heated waste product of copper processing) which is stored on site and to tailings (an end waste product) which are stored in holding ponds. These contain copper minerals and other substances with potential for dispersion into the environment. Further study of these wastes is ongoing. However, present studies do not implicate the copper or copper salts of such substances in known human disease. Further, the cupric salts in such substances cannot be expected to be so present in amounts much different from that in earth crust. Further study is necessary to determine whether such forms of cupric salts are toxic or are in themselves a hazard in the sites given for their storage. There is no reported case of toxicity in a human from any secondary leak of cupric salts from such sources into the environment.

Comparative Human Toxicity

Of the substances proposed to be listed in the "Superfund" fee schedule, two stand out from the toxicological point of view as strikingly inappropriate, in comparison to the others. One is copper, for the reasons given above. The other is zinc.

Both above elements are essential in the human diet for human health, as they are similarly essential in the diets of birds and mammals. Both copper and zinc are ubiquitous in nature, and have been both used medically as astringents and emetics. Zinc is further used widely in the prevention of athlete's foot, dandruff, and widely used in the antiobiotic bacitracin.

Copper and zinc appear to have similar routes of storage and excretion in humans; and for both substances humans show a large tolerance and buffer capacity. Rarely has a death occurred from either, and when it did it was usually by suicidal administration. Both are not known to produce significant disease from chronic exposure, with the possible exception of a benign transient condition, "zinc chill" or a "fever" in some heavily exposed workers.

TABLE I.
TOXIC OR HAZARDOUS SUBSTANCE RATINGS OF COPPER SALTS

	Copper Salt	DOT Rating	Clean Water Listing	Toxicity Rating
1.	Cupric Acetate	ORM-E*	Yes**	4***
2.	Cupric Acetoarsenate	Poison B	Yes	5
3.	Cuprous Acetylide	Forbidden	No	
4.	Cupric Amine Azide	Forbidden	No	
5.	Cupric Arsenite, solid	Poison B	No	5
6.	Copper based pesticide	Poison B	No	5
7.	Cupric Chloride	ORM-B	Yes	4
8.	Cupric Cyanide	Poison B	No	4
9.	Cupric Nitrate		Yes	3
10.	Cupric Oxalate	ORM-E	Yes	
11.	Cupric Sulfate	ORM-E	Yes	4
12.	Cupric Sulfate, Amm.	ORM-E	Yes	
13.	Cupric Tartrate	ORM-E	Yes	
14.	Cupric Tetramine Nitrate	Forbidden	No	
15.	Cupric Ethylene Diam. Sol	Corrosive	No	

* Other Regulated Material not included in any other hazard class.
** Generally based on aguatic toxicity.
*** Lethal Dose Estimate: Class 5- 50 mg/kg; Class 4- 500 mg/kg; Class 3- 5000 mg/kg

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TABLE II.
COMMERCIAL USE SECTORS OF SPECIFIC COPPER SALTS

	Copper Salt	Agricultural Pesticide	Wood Preservative	Catalyst	Organic Chemistry	Analytic Chemistry	Electroplating	Fabrics	Flame-proofing	Glass, Ceramics	Medicine	Pigments	Printing	Mining, Metals	Paper
1.	Cupric Acetate	X		X	X	X	X	X	X		X	X	X		
2.	Cupric Acetoarsenate	X	X									X			
3.	Cuprous Acetylide			X	X										
4.	Cupric Amine Azide														
5.	Cupric Arsenite, solid	X	X		X										
6.	Copper based pesticide	X													
7.	Cupric Chloride	X	X	X	X	X		X	X	X	X	X	X	X	X
8.	Cupric Cyanide														
9.	Cupric Nitrate	X	X		X		X	X		X	X		X	X	X
10.	Cupric Oxalate														
11.	Cupric Sulfate	X	X		X	X	X	X	X	X	X	X	X	X	X
12.	Cupric Sulfate, Amm.														
13.	Cupric Tartrate														
14.	Cupric Tetramine Nitrate														
15.	Cupric Ethylene Diam. Sol.														

X = Known Use

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ISSUE SUMMARY:

A FINANCIAL ASSESSMENT OF THE SUPERFUND EXPANSION AND PROTECTION ACT OF 1984 (H.R. 5640) WITH RESPECT TO THE DOMESTIC COPPER INDUSTRY

Passage of H.R. 5640 in its current form, would cost the domestic copper industry \$274 million (1985\$) over the period 1985-1990. This cost presents a major obstacle to the long-term viability of this beleaguered industry which has lost \$2.1 billion since 1981 and is struggling to survive.

The cost impact on Kennecott alone would be approximately \$80 million at full production. These costs cannot be passed on to consumers. Kennecott would have to absorb these costs or seek ways to cut costs elsewhere to compensate for this additional cost burden. Labor force reductions of about 400 people or reduced wages of \$1.00 to \$1.50 per hour would be required to offset this tax. Such labor force reductions are virtually impossible to achieve given the substantial layoffs and labor efficiencies that have already been introduced by Kennecott in recent years to improve its competitiveness relative to foreign competition. The result of the tax would be to increase unemployment in an industry where this is already a critical problem. In practical terms, the only effect of this tax will be to reduce Kennecott's chance for survival.

From a technical perspective, there are several other flaws in this bill:

- The initial formula for feedstock taxation envisioned that taxes imposed would be 1.5% to 3.0% of the selling price of the substance. However, if the metal price continues to fall, the effective tax rate could be higher.

- The fixed lower limit to the feedstock tax, 1.5 cents/pound in the case of copper, places an undue burden on producers during periods when copper prices fall to cyclical lows — precisely the circumstance when the industry needs relief rather than an additional burden.

- The price index used for tax escalation is inappropriate for copper or other non-ferrous metals. Indeed, no non-ferrous metal is included in this index. Had H.R. 5640 been enacted in 1973 (the year when this index was first published and the base year used), the tax on copper would now be \$88.17 per ton, more than 7% of today's copper price.

- The tax schedule used in H.R. 5640 leads to substantially different tax rates when calculated as a proportion of selling price. By this measure, for example, copper is taxed at about 17 times the rate as uranium — a ratio that bears no relation whatsoever to the relative toxicities of these metals.

- H.R. 5640 places copper at a competitive disadvantage relative to aluminum, its chief competitor (which is not taxed in this bill). As a class, copper is no more toxic than aluminum. Neither should be taxed.

A FINANCIAL ASSESSMENT OF THE SUPERFUND EXPANSION AND PROTECTION ACT OF 1984 WITH RESPECT TO THE DOMESTIC COPPER INDUSTRY

Kennecott
Salt Lake City, Utah

August 1984

Background

On August 10, 1984, the U.S. House of Representatives passed, by a vote of 323 to 33, the Superfund Reauthorization Bill, H.R. 5640.

The primary objective of the reauthorization bill is to raise $10.2 billion (a sixfold increase over existing fund) over the next five years to be used for cleaning up more than 1,600 toxic waste sites. To raise the required funds, the bill provides for the taxation of identified chemicals at prescribed rates. Copper metal, lead, and zinc are included among these chemicals. Also included in the bill are provisions for taxing copper and zinc compounds. Tax rates provided in H.R. 5640 for these metals are:

1985 Dollars Per Ton

	1985	1986	1987	1988 Thereafter
Copper	23.60	30.00	30.00	30.00
Lead	8.27	11.03	12.41	16.54
Zinc	12.48	16.64	18.72	24.96

The foregoing rates will be applied against sales tonnages and after 1985 the rates will be adjusted for inflation by using the producer price index for basic inorganic chemicals.

An additional provision of H.R. 5640 provides for increased revenue collection beginning in 1987 should a "waste-end tax" not be enacted. Rates for copper will increase by 16.7% along with a 33.3% increase for lead and zinc. The subsequent analysis is limited to copper metal. This superfund tax of $30.00 per ton (1.5 cents/pound) places an intolerable burden on a commodity which sells for approximately 62 cents/pound.

Impact on the U.S. Copper Industry

Since 1981, it is estimated the U.S. copper industry has incurred losses in excess of $2.1 billion. During the 1982 recession, the copper price fell to its lowest level, in real terms, since the Great Depression. During the past one and one-half years, the U.S. economy has rebounded with robust growth and copper consumption has increased commensurately, but copper prices improved only marginally. During the last two quarters, the copper price once again declined to the depression era levels. This phenomenon is due to an excess world copper supply caused by overproduction from third world producing nations, principally Chile, and to the increasing value of the U.S. dollar compared to other world currencies, a consequence of high U.S. interest rates. The U.S. copper industry therefore has continued to incur enormous losses during a boom period in the U.S. economy.

In response to these adverse economic conditions, the U.S. copper industry has closed many operating properties. Copper mine producing capacity in the U.S. was 1.9 million tons per annum in 1981. In the last three years, 250 thousand tons (13% of capacity) has been permanently closed down and 650 thousand tons per annum (34% of capacity) has been temporarily closed down. The net result has been losses in excess of 20,000 jobs, about half the work force, in the last three years.

In short, the U.S. copper industry is fighting for its survival. If this bill, H.R. 5640, were to be enacted in its present form, an additional cost of $274 million (1985 $) at full production (1.65 million tons per annum) will be incurred over the period ending September 30, 1990. It would be impossible to pass these additional costs through to the consumer because copper is an internationally traded commodity whose price is determined by the overall world supply/demand balance rather than set unilaterally by U.S. producers. Importers of copper metal, of course, would have to pay the same tax, but the cost structure of Chile, the major source of imported copper to the United States, is such that this incremental cost is likely to be absorbed. However, importers of copper products, as opposed to copper metal, would be exempt from the Superfund tax, thereby placing the domestic copper fabricators and producers at a further competitive disadvantage.

Impact on Kennecott

From mid-1981 through mid-1984, Kennecott (the nation's largest copper producer) has incurred losses of $381 million. Kennecott's various production facilities have been operating at less than full capacity. As of July 1, 1984, the status of operations was:

Operating Property	Current Mode of Operation
Chino Mines (New Mexico)	Curtailed production
Ray Mines (Arizona)	partial closure
Utah Copper	2/3 shutdown
Baltimore Refinery	shutdown
McGill Smelter (Nevada)	shutdown
Ozark Lead (Missouri)	shutdown

Kennecott's current work force is about 7,450 less, or approximately 40% of the 1980 employment level.

If Kennecott were to return to full production as of January 1, 1985, the cumulative impact of the taxes imposed by H.R. 5640 through the expiration date of September 30, 1989, would be $75 million in 1985 dollars. Assuming a 5% per annum inflation rate in the appropriate index, the total cost would be approximately $84 million. This figure does not include provision for potential waste-end taxes nor the imposition of additional feedstock taxes mandated in H.R. 5640 if these waste-end taxes are not imposed. For this reason, actual taxes at full capacity output would be higher than those estimated here by at least 17%, and possibly a larger amount if more onerous waste-end taxes are subsequently enacted. These added costs on top of an already precarious situation make it all the more difficult for Kennecott to regain economic health.

Significant progress has been made over the past three years by Kennecott in its efforts to reduce its cost of copper production. Through these efforts, copper production costs have been reduced by more than 30%, however, falling prices have eroded these efficiency gains.

For Kennecott to justify the resumption of full production or even to continue at its present rate, some way of offsetting the cost of H.R. 5640 must be found, since it is not possible to pass the tax through to the consumer. Offsetting this additional cost would, therefore, require, at full production, a further reduction in the work force of approximately 400 people. Further labor force reductions necessary to compensate for these taxes would be extremely difficult to achieve -- but, even if successfully implemented, would only increase unemployment. Although it is not the intention of H.R. 5640, this legislation could further reduce Kennecott's prospects for survival. The obvious conclusion drawn is that the House Ways and Means Committee is significantly underestimating the serious burden it will impose upon an already depressed industry.

More Detailed Analyses

Funding for the final H.R. 5640 bill passed by the House is based upon a formula provided by the staff of the House Ways and Means Committee. As originally provided in H.R. 5640, the tax rates were to be based upon the "lower of $30 per ton or a specified percentage of estimated 1985 selling prices." The percentage was to have been "1.5 percent in 1985, 2.0 percent in 1986, 2.25 percent in 1987, and 3.0 in each of 1988, 1989, and 1990." However, in the final H.R. 5640 bill, contrary to the original provisions, the cost per ton for each chemical for each year was specified as a fixed amount (subject to escalation).

Given this, it is possible to back calculate the estimated 1985 selling price for copper used in the final taxation determination in H.R. 5640 as 78.6 cents/pound.

In the last three years, the copper price has only exceeded 79 cents/pound for only 10 days and is currently selling for approximately 62 cents/pound. Therefore, these estimated selling prices appear unrealistic.

Observations and Concerns

First, it is very difficult to estimate worldwide future metals prices. Not only does it require an assessment of macroeconomic forecasts and basic supply/demand analysis for the particular commodity, but, even if these were correct, other world financial market variables, such as the value of the dollar, can significantly impact these projections.

Second, the taxation schedule given in the final form of H.R. 5640 has a curious and disturbing feature. Whereas the original form specified a tax per unit weight or percentage of the estimated selling price, whichever is lower, the final form replaced this concept with a fixed cost per ton or an indexed value, whichever is greater. Thus, for example, if copper prices were to fall to say 50 cents/pound in 1986, the effective tax rate would be 1.5 cents/pound or 3% of price — twice the percentage in the formula proposed in the original form of H.R. 5640. In these circumstances of falling prices, the tax would be particularly painful precisely when the industry needs relief rather than an additional burden. Nor is this compensated for in circumstances when prices are higher than projected, because the basic tax rate is indexed upward.

Third, the index used for upward adjustment of tax rates on inorganic compounds is specified in H.R. 5640 as the producer price index for basic inorganic chemicals as published by the Secretary of Labor. This price index has been published by the Office of Energy and Chemical Prices, Bureau of Labor Statistics, Department of Labor, since 1973. It is based upon chemicals classified as SIC Major Group 28, chiefly from four digit SIC codes 2812 (Alkalies and Chlorine) and 2819 (Industrial Inorganic Chemicals Not Elsewhere Classified). While some copper compounds are included under SIC code 2819 (namely copper chloride, iodide, oxide, and sulfate), this index is dominated by other unrelated chemicals. Neither copper nor lead nor zinc metals prices are included in this price index. Metals prices do not match this price index at all, as shown in attachment II for the case of copper. From a base value of 100 in 1973 (when this index was established), the producer price index for basic inorganic chemicals rose to a value of

293.9 in July 1984. But, relative to this same base year, an index of the U.S. producer price for copper would have risen to only 106.1, lower by nearly a factor of 2.8. Put in different terms, if H.R. 5640 were enacted in 1973 and a feedstock tax for copper was initially set at $30 per ton, and indexed by the producer price index for inorganic chemicals (as called for in H.R. 5640), the current copper feedstock tax would be $88.17 per ton, or more than 7% of today's copper price!

Finally, a disturbing feature of the taxing proposal is the treatment of all chemicals on a tonnage basis regardless of the values of the chemicals and relative toxicity. This can be illustrated with a simple example.

	Est. 1985 Sales Price (Per Pound)	1985 Tax Rate ($/Ton)	Tax Rate (Cents/Pound)	Tax as % of Sale Price
Copper	78.6	23.60	1.18	1.5
Uranium	$17.00	30.00	1.5	.088

The tax on copper compared to that on uranium is disproptionate when one considers relative toxicity.

Competitive Disadvantage

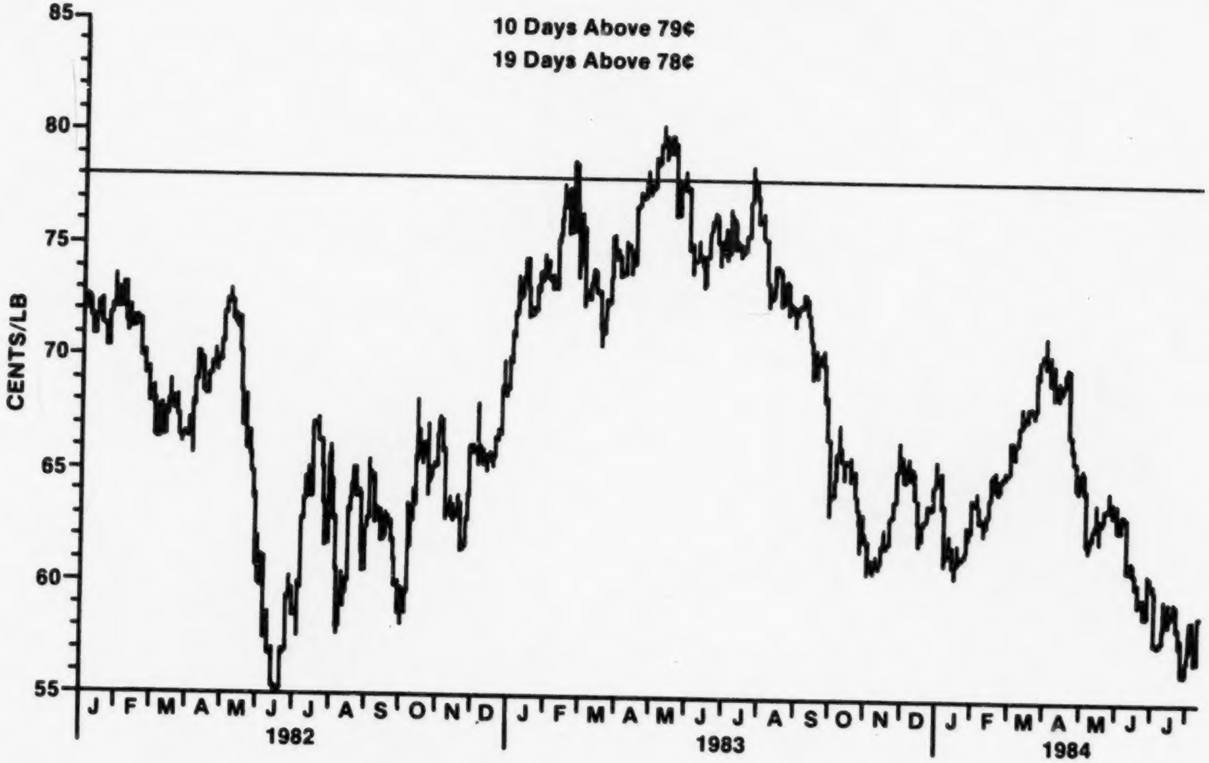
In the final bill as reported by the House Ways and Means Committee, primary aluminum was deleted as a taxed chemical. This action provides an additional competitive advantage to copper's principal competing metal.

We are not suggesting that aluminum is toxic nor that it should be taxed, but neither is copper. And to provide this advantage to aluminum is certainly unfair.

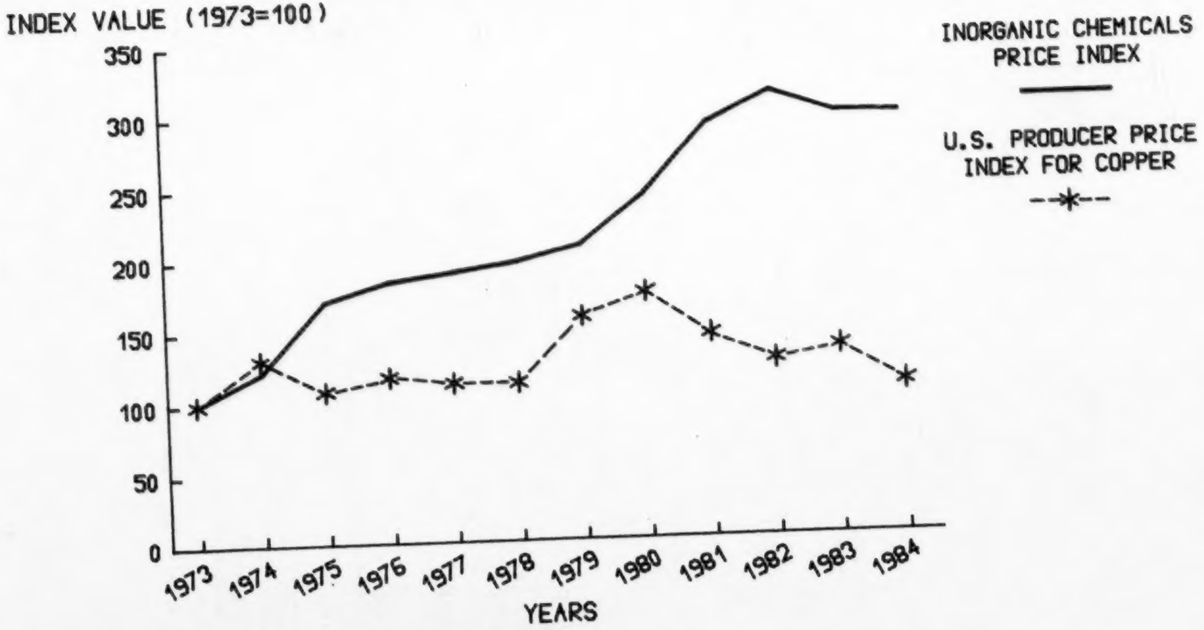
Conclusion

The preceding analysis serves to emphasize the point that the taxing provisions of H.R. 5640 for copper metal is not fair and will seriously exacerbate the present crisis in the industry. Copper is an essential and strategic metal widely used in the industrial and consumer sectors of the U.S. economy. The U.S. generally produces and consumes 25% of Free World refined copper production, while approximately 50% comes from less stable Third World countries. If the U.S. were unable to supply the nation's needs, the needs, copper would have to be supplied from these other countries. This would put the U.S. at a strategic disadvantage. Surely this is not the purpose of H.R. 5640.

1982 - 1984 DAILY COMEX COPPER PRICES



COMPARISON OF PRODUCER PRICE INDEX FOR BASIC INORGANIC CHEMICALS WITH COPPER PRICE SERIES ILLUSTRATES FALLACY OF AVERAGES



SOURCES: OFFICE OF ENERGY AND CHEMICAL PRICES, BUREAU OF LABOR STATISTICS AND AMERICAN BUREAU OF METAL STATISTICS

WASTES GENERATED BY PRIMARY COPPER PRODUCTION

Introduction

The copper mining industry generates huge quantities of waste in the production of copper. The attached flow sheet illustrates the various steps of the process. In the final analysis, approximately 590 tons of waste are generated for each ton of refined copper produced. A more definitive description of these wastes follows:

Mining Wastes

In general, waste from copper mines consists of that material overlying and surrounding the copper orebody. This overburden is equivalent to the natural soil typical of the earth's crust and underlying deep soils of the general region. The quantities of this waste material are dependent upon the configuration of the mine, the characteristics of the orebody (type, shape, geology, depth, and ore grade), and mining method. Less mine waste is generated in underground mining than in open-pit mining. This difference is readily apparent in comparison of the 1980 average waste to ore ratios of 0.005 for underground mines and 2.41 for open-pit mines. In the U.S., approximately 90% of the produced copper is mined from open-pit mines primarily due to the ore grade and geology constraints preventing alternative underground mining of these ores. Quantities of the amount of mining wastes for each of five years are shown in the attached table.

The character of these wastes can be described as having very low toxicity. It would be expected that the natural soils in a region containing highly mineralized zones will reflect similar mineralization but in much lower concentrations. These regions will contain a higher background concentration level above that of the earth crust averages for such heavy metals as copper, lead, zinc, arsenic, cadmium, silver, etc. These metals are defined by EPA as hazardous substances. However, in the region of the mine, these substances are retained in their natural mineral state and are merely moved from one location to another during the mining process. In their natural state, the metal minerals are essentially water insoluble. Some leaching of the metals naturally occurs regardless of whether the earth was disturbed by mining or not. An appropriate processing environment must be constructed to accelerate this leaching protential. This is, in fact, done to recover copper from the stockpiled low grade ore and, in some locations, the overburden through a process known as dump leaching. In these locations, the overburden is no longer waste material since it is part of the copper recovery process. Copper mining waste has been subjected to the EPA EP toxicity test by both EPA and individual companies. The waste would be classified as non-hazardous by the current EPA criteria.

Concentrator Tailings

Concentrator tailings or mill tailings are the residues remaining after removal of the copper sulfide mineral from the ore. The prime difference between the character of mill tailings and mine overburden is the particle size of the waste. The ore has been pulverized to a particle size similar to talcum powder in order to facilitate the highest recovery of the copper mineral from the ore.

As the case with mine waste, the volumes of the waste are very high but have very low toxicity.

The tailings are collected in well structured impoundments for confinement of the waste to a localized area and to facilitate recovery of the water for recycle to the mill process. Practically all of the U.S. copper mining facilities are located in the arid west which requires 100% water recycle to meet the needs for high water requirements of the process and the practice of water conservation. Similar EP toxicity testing of the tailings (like the mine waste) resulted in findings as being non-hazardous.

Smelting

The prime waste material is the slag produced in the smelting process. This slag is removed to a confined disposal area in the molten state, dumped and allowed to solidify. The slag is composed predominantly of inert silicates and iron. This waste material also tested as non-hazardous using the current EPA criteria for definition of hazardous wastes.

SIMPLIFIED FLOW DIAGRAM FOR COPPER PRODUCTION FROM DOMESTIC ORES IN 1980

(All Quantities in 000 Metric Tons)

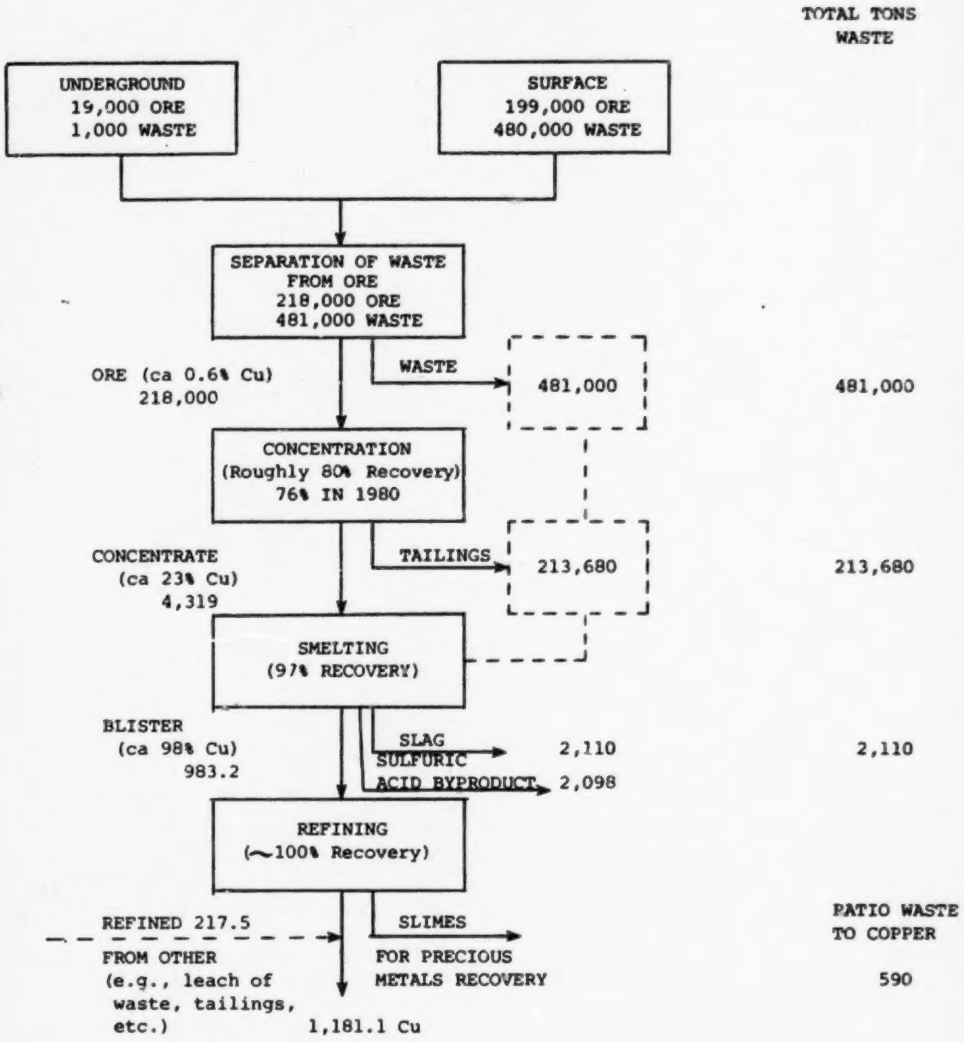

TOTAL TONS WASTE
UNDERGROUND 19,000 ORE 1,000 WASTE
SURFACE 199,000 ORE 480,000 WASTE
SEPARATION OF WASTE FROM ORE 218,000 ORE 481,000 WASTE
ORE (ca 0.6% Cu) 218,000
WASTE
481,000
481,000
CONCENTRATION (Roughly 80% Recovery) 76% IN 1980
CONCENTRATE (ca 23% Cu) 4,319
TAILINGS
213,680
213,680
SMELTING (97% RECOVERY)
BLISTER (ca 98% Cu) 983.2
SLAG
2,110
2,110
SULFURIC ACID BYPRODUCT
2,098
REFINING (~100% Recovery)
REFINED 217.5
FROM OTHER (e.g., leach of waste, tailings, etc.)
SLIMES
FOR PRECIOUS METALS RECOVERY
1,181.1 Cu
RATIO WASTE TO COPPER
590

TABLE I

Copper Mining
Open-Pit and Underground
U.S. Waste Generation
(Thousand Metric Tons)

Type of Material	Year 1978	1979	1980	1981	1982
Ore produced	239,247	277,532	221,597	276,692	182,344
Overburden	342,916	497,137	481,715	599,650	323,865
Waste/Ore Ratio*	1.43	1.79	2.17	2.17	1.78
Tailings	234,460	271,980	217,165	271,200	178,700
Slags	2,316	2,687	2,145	2,678	1,765
Total Waste	579,692	771,804	701,025	873,528	504,330

*Combined Open-Pit and Underground Mining. Open-pit mining ratio would be much higher e.g. 2.41 in 1980.

ISSUE SUMMARY:

WHY WASTE-END TAXES ARE ILL-ADVISED — THE NON-FERROUS MINING AND METALS INDUSTRIES PERSPECTIVE

Imposition of a waste-end tax on the non-ferrous mining industry would be disastrous. Disadvantages of such a tax under six classifications of criticism are summarized on Table I. The waste-end tax

-- is inequitable,

-- is unreliable as a source of tax revenue,

-- offers perverse incentives for illicit waste disposal,

-- has potential for significant economic dislocation,

-- is not cost effective and likely to be difficult to implement, and

-- has not been fully evaluated by any industry-wide analysis.

The production of copper, and zinc generates large volumes of low toxicity wastes per unit of marketable product. Even modest taxes per ton of waste translate to large taxes on a unit product basis. In domestically-produced copper, for example, nearly 600 tons of rock, ore, and other material are handled to produce one ton of refined copper. Even though most copper wastes involve extremely low concentrations of toxic materials and are environmentally benign in general, all or nearly all of these waste streams could be subject to taxes under terms of several legislative proposals to date, so any tax per unit of waste is multiplied by a factor of 600 when converted to a per unit of product basis.

Waste-end taxes have another fundamental disadvantage from the perspective of the non-ferrous industries, and other industries subject to intense foreign competition. Under all waste-end proposals to date, imports would not be subject to these taxes. (Nor would it be feasible to extend the scope of this tax to cover imports.) Thus, domestic producers would be put at a disadvantage relative to their foreign competition. This is inequitable and could further threaten the economic viability of the domestic non-ferrous industry.

TABLE I.
MAJOR DISADVANTAGES OF A WASTE-END TAX IN THE SUPERFUND CONTEXT

CLASSIFICATION	BRIEF DESCRIPTION
INEQUITABLE	1. It would create an unfair economic advantage favoring imported products (untaxed by this scheme) over domestic equivalents (subject to the tax).
	2. Absent some "degree-of-risk" provision that would attempt to rank the relative toxicity of different waste-streams, the tax would be unfair to producers of high volume, low toxicity wastes. The quantification of degrees of risk may present an administratively infeasible task.
UNRELIABLE	3. GAO studies of state-implemented waste-end taxes have indicated that states (1) have not collected the revenues that were anticipated and (2) have not determined if the tax achieved its objective of encouraging more desirable waste management practices.
	4. Those firms with economically viable technological alternatives to reduce waste volumes will do so — and while this may achieve a desirable social goal it does not produce consistent funding. There is thus a tension among objectives. As GAO noted, there are "conflicting objectives inherent in many waste-end tax systems. The more successful the tax is in achieving its objective of encouraging more desirable waste management practices the less successful the tax will be in raising needed revenue."
PERVERSE INCENTIVES	5. It may encourage illicit waste disposal and intentional under-reporting of waste generation rates.
POTENTIAL FOR ECONOMIC DISLOCATION	6. Establishing statutory tax rates on categories of waste without regard to product value or economic impacts may create severe and unanticipated economic dislocations.
ADMINISTRATIVE DIFFICULTIES IN IMPLEMENTATION	7. The 1980 Senate Committee report on CERCLA observed that far fewer companies (1,000) would be subject to feedstock taxes compared to a possible 260,000 waste generators who might be covered under a waste-end tax.
	8. The objective of simplicity suggests that RCRA and CERCLA should not be intermingled. Such a procedure could impede the functioning of both. RCRA already has in place a satisfactory system of regulations and incentives to reduce and control present and future waste generation. CERCLA should be utilized as it was intended -- to provide fast, efficient, and cost-effective cleanup of abandoned sites.
UNEVALUATED	9. There has been no comprehensive assessment of the economic impact of waste-end taxes across varying industries. Absent such analysis, there is not a sufficient basis for rational decision-making.
	10. Waste generation rates per unit of useful product vary tremendously among industries. Any across-the-board tax rate is likely to have vastly different (and presently unknown) effects on the respective industries.
	11. With respect to the non-ferrous mining and metals industry, waste-end taxes in the amounts proposed in earlier bills could reach truly extraordinary proportions.

ISSUE SUMMARY: COPPER AND ITS RELATION TO THE HOUSE CRITERIA FOR FEEDSTOCK TAXATION (H.R. 5640)

The House of Representatives Report on the Superfund Expansion Act of 1984 set forth seven criteria for the addition of new chemicals to the "feedstock" list of substances to be taxed. (H.R. Report 98-890, part I, August 8, 1984, pp. 74-75.) As is shown below, copper metal does not meet these criteria and should not be taxed as a feedstock.

A response to these criteria, as applied to copper metal, is presented below:

Criterion I. "The generation of significant volumes of hazardous wastes during the manufacture of the taxable substance and its intermediate or final products."

- The manufacture of copper metal involves the mining, beneficiation, smelting, and refining of a water insoluble copper mineral. The wastes from this process cannot be defined as hazardous due to the statuatory exemption providing for study of these wastes under section 8002(f) and (p) of the Solid Waste Disposal Act of 1980. The EPA has not completed this study for Congressional Review as yet and is not anticipated to complete this study until Spring 1985. In any case, testing of these wastes under current EPA-promulgated criteria for definition of hazardous wastes indicates that the copper mining wastes would not be classified as "hazardous." The volumes of the non-hazardous wastes are significant in that approximately 600 tons of waste are generated for every one ton of copper metal which is produced.

Criterion 2: "The hazardous nature of the taxable substance in any of its forms (including its intermediate or final products)."

Copper metal in any of its forms (jewelry, coins, electrical wire, cathodes, etc.) is a benign substance with no hazardous properties. Copper metal is not used to produce the chemical copper compounds (cupric sulfate, cupric oxide, etc.) listed as chemical feedstocks, nor is it used to produce other chemical compounds. In the production of copper metal, intermediate compounds are not available to the environment by the nature of the process. Insoluble copper mineral compounds in their natural state are present in mining and milling wastes, however, these wastes are non-hazardous by current EPA criteria for definition of hazardous wastes.

Criterion 3: "The capability of the taxable substances to increase the hazard potential of other substances (e.g., acids may accelerate the release of other hazardous wastes into the environment)."

Copper metal is an inert solid substance. It has no properties similar to acids or other chemical compounds which can promote chemical reactions with other substances to form any hazardous waste, ignitable or explosive mixture, nor corrosive product in the environment.

Criterion 4: "The production of the taxable substance in significant volumes."

In light of the other criteria and goals of the taxation principle, production volume is relevant only if the substance is toxic or promotes the creation of hazardous wastes or substances. Copper metal is neither toxic nor meets these criteria, therefore, production volume is irrelevant.

Criterion 5: "The taxable substance was found in its raw, intermediate, or final product forms, at known superfund sites identified and evaluated by EPA."

Copper metal (raw, intermediate, or final product form) was not found at the superfund sites. Copper compounds were found at the sites with no reference to composition or concentration. As previously indicated, copper mining wastes are not hazardous by RCRA definition of a hazardous waste. Also, based upon the very low toxicity of copper, the presence of the substances is not relevant to the criterion.

Criterion 6: "Hazardous wastes generated in the manufacture of the taxable substance or its intermediate and final product, have been found at known superfund sites identified or evaluated by EPA."

The listed mining sites on the current NPL list, evaluated by EPA, contain defined hazardous substances, however, it does not mean that the wastes are hazardous. Significant conflict exists between the definitions of a hazardous substance under CERCLA and a hazardous waste under RCRA. Copper mining does not generate hazardous wastes. EPA defined hazardous substances do exist in the earth and the non-hazardous wastes produced at mine operations. A broad condemnation of the waste, because of the presence of a defined hazardous substance without proper consideration of the concentration, availability to the environment, toxicity perspective, along with many other variables, is inappropriate in the extreme.

Criterion 7: "The taxable substance at issue would be covered by the definition of 'hazardous substance' contained in current law."

Copper metal is not included in any current law definition. Copper chemical compounds are included.

ENVIRONMENTAL CONTROL
PRIMARY COPPER INDUSTRY

Air Quality

The principle copper ores in the U.S. consist of the mineral forms of copper sulfides. In the processing leading to copper metal, sulfur content of the mineral is removed and released in the form of sulfur oxides. In order to meet the current air quality standards, the sulfur oxides are collected and converted to sulfuric acid during the smelting process.

At the present time, the copper industry has achieved approximately 60% capture of sulfur oxide emissions through positive constant control. This has been accomplished at considerable expense to the industry. In fact, the industry has spent a larger percentage of available capital on pollution control than any other major industry as is shown in the attached exhibit.

Water Quality Control

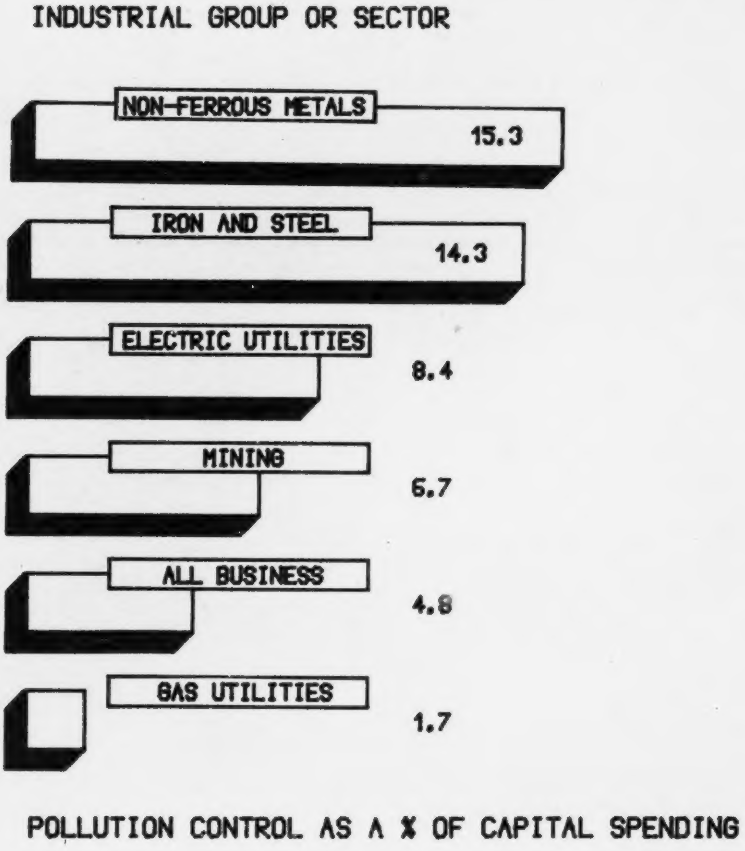
All water discharges from the mining, milling, smelting and refining are subject to promulgated EPA effluent limitations under the Clean Water Act. Additionally, individual state effluent limitations are incorporated as further requirements to be met in the discharge. The discharges are regulated under the NPDES permit program.

Solid Waste

At the present time, mining wastes are regulated as non-hazardous wastes under Sub-Title D of the Solid Waste Disposal Act. The industry is temporarily exempt from regulation under the Sub-Title C hazardous waste criteria of the same act. The Act in Sections 8002(f) and (p) mandated that EPA conduct a comprehensive study of the industry's wastes to determine if the wastes require to be regulated under the hazardous waste program. EPA is expected to submit the report of this study including recommendations for regulation to the Congress in mid 1985.

POLLUTION CONTROL EXPENDITURES:

THE NON-FERROUS INDUSTRIES HAVE SPENT A LARGER % OF CAPITAL EXPENDITURES ON POLLUTION CONTROL



DATA ARE FOR THE YEARS 1970-1982

ASSYMETRICAL ENVIRONMENTAL REQUIREMENTS

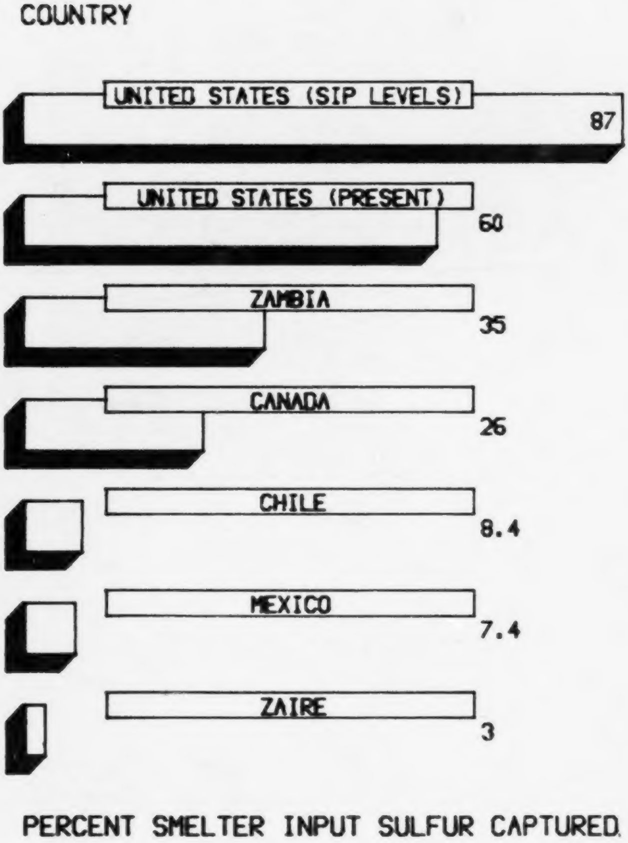
The domestic copper industry has to operate under some of the most burdensome environmental requirements that exist in the world. That these environmental constraints increase the quality of life and attain other socially desirable objectives is accepted by a majority of the American public. But it is also unarguable that these requirements increase production costs, particularly in the copper industry, and constitute a significant competitive disadvantage.

U.S. environmental standards are among the toughest in the world and significantly more stringent than those which prevail in the countries which compete for the domestic copper market.

The attached exhibit provides one illustration of the differences in the degree of environmental control between the United States and Zambia, Canada, Chile, Mexico and Zaire, all countries which compete with the domestic industry. The quantity displayed is the average level of sulfur capture (typically in plants which produce sulfuric acid) in the smelting of copper concentrates. The present and future U.S. capture levels are significantly in excess of those in our major competitors. Capture of this sulfur reduces the emissions of sulfur dioxide, but is costly.

SULFUR CAPTURE LEVELS COMPARED:

CAPTURE LEVELS IN CANADA, CHILE, MEXICO, U.S., ZAIRE AND ZAMBIA SHOW SUBSTANTIAL DIFFERENCES



SOURCE: EVEREST CONSULTING ASSOCIATES ESTIMATES

GOVERNMENT PARTICIPATION IN THE COPPER INDUSTRY

In recent years as a result of the development of new copper mines, and pressures to increase the ownership/participation of host governments in the copper mining sector manifested in the most extreme form by expropriation of the assets of multinational mining companies (as occurred notably in Africa, Peru, Chile, etc.), the influence of government in the copper industry has grown substantially.

The attached exhibit shows the extent of government control of the world copper industry in 1980. Government influence or control varies with the stage of production and the region, but is substantial in aggregate.

The entry of government into this sector has brought profound changes in the structure of the copper industry:

- Governments are formidable competitors, able to implement a variety of policy initiatives (concessionary tax schemes, currency devaluation, "Full Faith Loan Guarantees", etc.) and to tap sources of funding (e.g., the development banks and the IMF) that are not generally available to the private sector.

- Some of the properties that were expropriated, for example the Chilian mines once belonging to Anaconda and Kennecott, are among the lowest cost in the world. Thus deprived of some of their most productive assets, these companies faced additional challenges in their struggle to remain competitive.

- Governments seek to attain a variety of policy objectives that may be unrelated to the profit motive, such as the generation of foreign exchange, stability of employment, etc. In consequence, production at government-operated mines is often less price-responsive than that of the private sector. This lack of price responsiveness tends to exaggerate the boom-to-bust variability of price cycles precipitated by variations in the level of industrial activity among copper consumers.

GOVERNMENT INFLUENCE AND CONTROL IN THE WORLD COPPER INDUSTRY[a,b]

	Mine (Based on Production)	Smelter (Based on Capacity)	Refinery (Based on Capacity)
Market Economy Countries:			
Percent Influenced by Government	40	25	27
Percent Controlled by Government	32	22	22
World Total:			
Percent Influenced by Government	54	43	42
Percent Controlled by Government	47	40	38

[a] Government influenced defined as that proportion of copper production (capacity) in which governments have at least a percentage ownership. Government controlled defined as the prorated percentage of copper production (capacity) owned by governments.

[b] Includes allowance for Mexicana de Cobre's 1979 La Caridad mine capacity.

Source: Sousa, L. J., "The US Copper Industry: Problems, Issues, and Outlook," Information Circular/Minerals Policy Analysis Series.

SULFURIC ACID & SUPERFUND

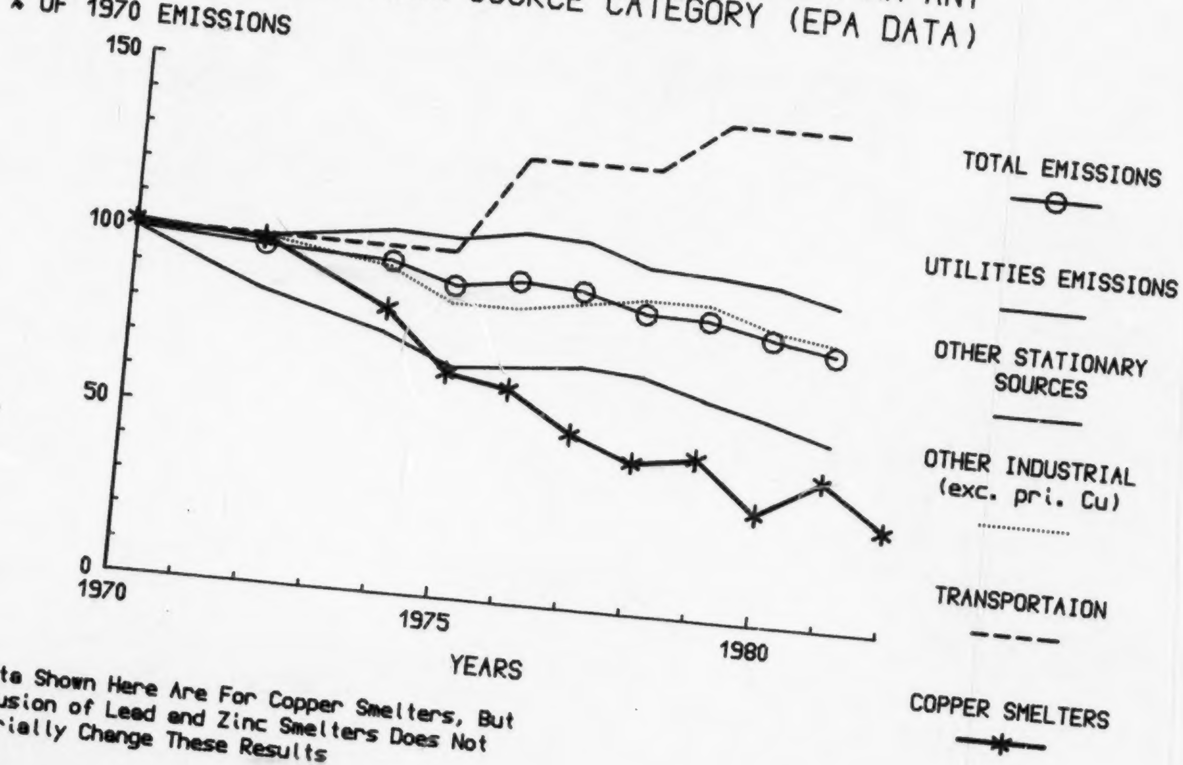
As noted elsewhere, sulfuric acid is produced at copper smelters as part of government-mandated control of sulfur dioxide emissions.

Since 1970, substantial progress has been made in reducing sulfur dioxide emissions at copper smelters, more, in fact, than for any other industrial sector as the attached exhibit shows.

In 1975, the production of sulfuric acid at copper smelters exceeded the copper output of these smelters on a weight basis! By 1982, the quantity of smelter produced sulfuric acid was twice that of copper. This acid cannot be sold at a price that approaches the cost of production.

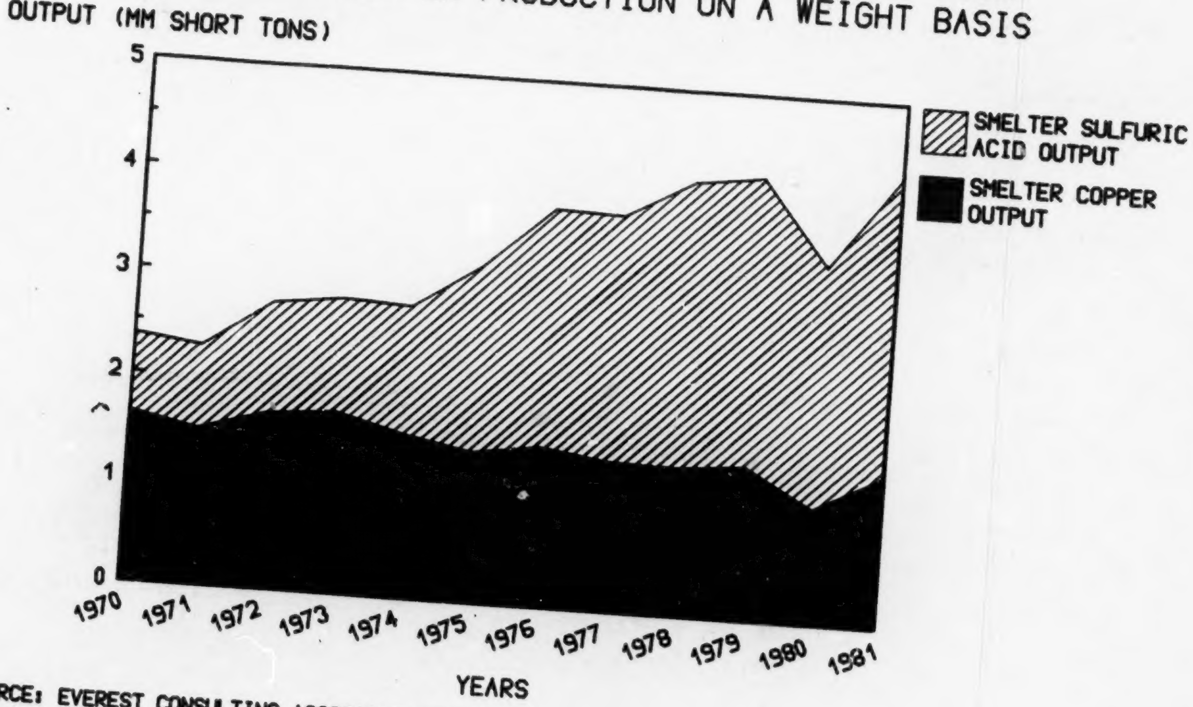
For the government to impose a feedstock tax on this involuntary acid production would be inconsistent to say the least. This was recognized by Congress when the original CERCLA legislation was passed and in H.R. 5640 as reported by the House Ways & Means Committee. It is important that their exemption be retained.

SINCE 1970 NON-FERROUS* SMELTERS HAVE REDUCED SULFUR DIOXIDE EMISSIONS MORE THAN ANY OTHER MAJOR SOURCE CATEGORY (EPA DATA)



* Data Shown Here Are For Copper Smelters, But Inclusion of Lead and Zinc Smelters Does Not Materially Change These Results

EVIDENCE OF INCREASING SULFUR CAPTURE AT COPPER SMELTERS: IN 1975 SULFURIC ACID PRODUCTION EXCEEDED COPPER PRODUCTION ON A WEIGHT BASIS



SOURCE: EVEREST CONSULTING ASSOCIATES FROM CDA AND USBM DATA

STATEMENT OF RICHARD J. BAUER, PRESIDENT, EASTERN ALLOYS, MAYBROOK, NY, AND CHAIRMAN, WASHINGTON CONFERENCE FOR ZINC, INC., WASHINGTON, DC

Mr. BAUER. Thank you, Mr. Chairman. I am president of Eastern Alloys of Maybrook, NY, and also chairman of the Washington Conference for Zinc, which represents a complete cross-section of consumers and suppliers of the zinc industry. Zinc is an essential and versatile mineral. Zinc has no known adverse physiological effects upon man except at high concentrations. In fact, zinc is an essential mineral for the growth and development of almost all life from microorganisms to man. I would just like to say as an example that zinc is added to fertilizers, feed stocks for animals, and we all take it in our vitamins, and it has been an essential part of intake food for people. The tax proposed in the House version of the Superfund bill would amount to an additional cost of a penny per pound of zinc alloy. A pound of alloy currently sells for approximately 56 cents per pound. An additional penny in an item that sells for 56 cents can be critical to sales and to profits in an industry that is struggling to recover and regain its markets. Since 1974, the U.S. zinc industry has lost a large portion of its market. To conserve energy, automotive industry engineers have substituted the use of lighter materials for zinc in the design of cars. Because the automobile industry is considered a pace-setting industry, other consumer product industries followed the automotive industry's lead and replaced zinc with substitute materials. The result was devastating to the United States zinc industry. A drop in the consumption of zinc in the United States from a high of over 1,500,000 tons in 1973 to a low of approximately 800,000 tons in 1983. By investing in new technology and in costly marketing programs to develop new applications for the use of zinc, many independent zinc alloys in other segments of the industry have helped zinc recover some of the U.S. market. Congress has not, in prior environmental legislation, concluded that zinc is environmentally hazardous. Zinc was included in the House version of the Superfund reauthorization bill via the Clean Water Act. It is important to recognize the circumstances under which zinc is included in the Clean Water Act. Zinc's inclusion under the Clean Water Act is primarily based on its adverse effects on certain fish and aquatic plants. Studies have exhibited toxicity to some aquatic life in high concentrations. However, aquatic life such as oysters, crustaceans, mullocks consume and tolerate these high levels of zinc. Humans consume them with no harmful effects or health effects at all. No environmental legislation has been enacted by Congress since 1980 that supports the taxing of all zinc as a hazardous substance for Superfund reauthorization purposes. There is no justification for altering that Congressional judgment and intent. As in 1980, there is no reason to blanket zinc into the Superfund and no reason to tax all of it. Thank you.

The CHAIRMAN. Thank you.

[Mr. Bauer's prepared written statement follows:]

TESTIMONY OF

R.J. BAUER
CHAIRMAN
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BEFORE THE
SENATE FINANCE COMMITTEE

CONCERNING

SUPERFUND REAUTHORIZATION

SEPTEMBER 21, 1984

I AM R.J. BAUER, PRESIDENT OF EASTERN ALLOYS, MAYBROOK, NEW YORK, CHAIRMAN OF THE WASHINGTON CONFERENCE FOR ZINC, INC., WITH OFFICES AT 900 17TH STREET, N.W., SUITE 504, WASHINGTON, D.C. 20006.

THE WASHINGTON CONFERENCE WAS ESTABLISHED IN MAY OF THIS YEAR AFTER A BRIEFING BY SENATE AND HOUSE STAFF PERSONNEL ON THE SUPERFUND REAUTHORIZATION LEGISLATION. OVER 135 ZINC COMPANIES INCLUDING U.S. AND FOREIGN PRODUCERS, INDEPENDENT ALLOYERS, DIE CASTERS, HOT DIP GALVANIZERS, AND IMPORTERS AND TRADING COMPANIES PARTICIPATE IN THE ACTIVITIES OF THE CONFERENCE.

ZINC IS AN ESSENTIAL AND VERSATILE MINERAL, RANKING FOURTH IN METAL PRODUCTION FOLLOWING STEEL, COPPER, AND ALUMINUM. THE ZINC INDUSTRY EXERTS WORLDWIDE INFLUENCE IN MINING, SMELTING, AND TRADE.

ZINC INDUSTRY OPERATIONS CONSIST OF MUCH MORE THAN EXTRACTION OF THE MINERAL FROM THE GROUND. SMELTING, ALLOYING, DIE CASTING, BRASS AND BRONZE PRODUCTION, GALVANIZING, AND ZINC DUST PRODUCTION ARE THE MAJOR SEGMENTS OF THE ZINC METAL INDUSTRY. EACH PROVIDES EMPLOYMENT FOR THOUSANDS OF AMERICANS AND RESULTS IN CONSUMER ITEMS RANGING FROM EYEGLASS FRAMES TO FIRE HOSE COUPLINGS, CARBURETORS, COMPUTER COMPONENTS, AND AUTO TIRES.

ZINC HAS NO KNOWN ADVERSE PHYSIOLOGICAL EFFECTS UPON MAN EXCEPT AT VERY HIGH CONCENTRATIONS.[1] IN FACT, ZINC IS AN

ESSENTIAL MINERAL FOR THE GROWTH AND DEVELOPMENT OF ALMOST ALL LIFE, FROM MICROORGANISM TO MAN. MAN'S ESTIMATED DAILY INTAKE OF ZINC IS ABOUT 10-15 MG., CLOSE TO THE U.S. RECOMMENDED DAILY ALLOWANCE OF 15 MG.

THE WASHINGTON CONFERENCE FOR ZINC UNDERSTANDS THAT ONE OF THE PURPOSES OF THE SUPERFUND REAUTHORIZATION BILL IS TO BROADEN THE SUPERFUND TAX BASE AND TO INCREASE THE AMOUNT OF REVENUES TO CLEAN UP HAZARDOUS WASTE SITES. H.R. 5640, PASSED BY THE HOUSE, WOULD TAX ZINC AT $12.48 PER TON IN 1985 AND INCREASE THE TAX TO $33.28 BY 1990.

WE FIRMLY BELIEVE THAT THE ZINC INDUSTRY SHOULD NOT BE SUBJECTED TO A TAX THAT WOULD BE PUNITIVE IN NATURE. THE INCLUSION OF ZINC AS A HAZARDOUS SUBSTANCE WITH THE SUPERFUND REAUTHORIZATION WOULD HAVE GRAVE CONSEQUENCES ON THE ZINC INDUSTRY WITH REPERCUSSIONS FELT IN MANY CONSUMER PRODUCT INDUSTRIES.

I WOULD LIKE TO DESCRIBE THE ALLOYING INDUSTRY AND ITS PROCESS TO ILLUSTRATE HOW CRIPPLING A TAX WOULD BE TO THE ZINC INDUSTRY.

ALLOYERS SUPPLY THE CASTING AND FORGING INDUSTRIES WHO PRODUCE COMPONENTS FOR AUTOMOBILES, BUILDER'S HARDWARE, ELECTRIC UTILITIES, ELECTRONIC PRODUCTS, AND HUNDREDS OF OTHER CONSUMER ITEMS.

INDEPENDENT ZINC ALLOYERS ARE A CHANNEL OF DISTRIBUTION FOR APPROXIMATELY 200,000 TONS OF ZINC PER YEAR. THE

INDEPENDENT ALLOYERS, VIRTUALLY ALL OF WHICH ARE FAMILY FOUNDED, OWNED AND OPERATED, OPERATE ON A NARROW PROFIT MARGIN.

IN ORDER TO PRODUCE A SPECIFIC ALLOY REQUESTED BY AN ALLOYER'S CUSTOMER, THE ALLOYER MUST BUY THE MOST EXPENSIVE GRADE OF ZINC, KNOWN IN THE INDUSTRY AS SPECIAL HIGH GRADE ZINC. IT IS THEN MIXED WITH ALLOYING MATERIALS, TESTED WITH THE BEST TECHNOLOGY AVAILABLE TO MEET SPECIFICATION REQUIREMENTS, AND THEN SHIPPED TO THEIR CUSTOMERS, MEMBERS OF THE CASTING AND FOUNDRY INDUSTRIES.

ALLOYERS DO NOT REALIZE A LARGE PROFIT ON EACH TON OF ALLOY SHIPPED BECAUSE OUR CUSTOMERS, TOO, ARE SMALL BUSINESSES THAT COMPRISE THE ZINC DIE CASTING INDUSTRY. WE EXTEND CREDIT ON VERY GENEROUS TERMS, SHIP SMALL LOADS, AND MANY ALLOYING COMPANIES, LIKE MY FIRM, PROVIDE TECHNICAL SERVICES AND SUPPORT FOR DIE CASTERS.

A TAX ON ZINC WOULD DETRIMENTALLY AFFECT THIS DELICATE INFRASTRUCTURE.

THE TAX PROPOSED IN THE HOUSE VERSION OF THE SUPERFUND BILL WOULD AMOUNT TO AN ADDITIONAL COST OF A PENNY PER POUND FOR ZINC ALLOY. A POUND OF ALLOY CURRENTLY SELLS FOR APPROXIMATELY 56 CENTS. AN ADDITIONAL PENNY IN AN ITEMS THAT SELLS FOR 56 CENTS CAN BE CRITICAL TO SALES AND TO PROFITS IN AN INDUSTRY THAT IS STRUGGLING TO RECOVER AND REGAIN ITS MARKET.

WE NEED THIS MARGIN TO REMAIN COMPETITIVE. WE CERTAINLY DO NOT NEED THE ADDITIONAL COST OF A CENT PER POUND.

SINCE 1974, THE U.S. ZINC INDUSTRY HAS LOST A LARGE PORTION OF ITS MARKET.

TO CONSERVE ENERGY, AUTOMOTIVE INDUSTRY ENGINEERS SUBSTITUTED THE USE OF LIGHTER MATERIALS FOR ZINC IN THE DESIGN OF CARS. IN THE 1960'S AND THE EARLY 1970'S, THE AUTOMOTIVE INDUSTRY WAS THE MAJOR CONSUMER OF ZINC IN THE U.S. IN 1975, THE AVERAGE NEW CAR CONTAINED APPROXIMATELY 61.7 POUNDS OF ZINC PER NEW CAR; IN 1978, THE AVERAGE NEW CAR CONTAINED ONLY 36.5 POUNDS OF ZINC.

BECAUSE THE AUTOMOTIVE INDUSTRY IS CONSIDERED A PACE-SETTING INDUSTRY, OTHER CONSUMER PRODUCT INDUSTRIES FOLLOWED THE AUTOMOTIVE INDUSTRY'S LEAD AND REPLACED ZINC WITH SUBSTITUTE MATERIALS. THE RESULT WAS DEVASTATING TO THE U.S. ZINC INDUSTRY. A DROP IN THE CONSUMPTION OF ZINC IN THE U.S. FROM A HIGH OF OVER 1,500,000 TONS IN 1973 TO A LOW OF APPROXIMATELY 800,000 TONS IN 1983 OCCURRED. THE LOWER CONSUMPTION LEVELS LEAD TO THE CLOSING OF SEVERAL ZINC PRODUCING PLANTS IN THE U.S. MANY ALLOYERS AND PRODUCERS HAVE INVESTED HUNDREDS OF THOUSANDS OF DOLLARS IN NEW TECHNOLOGY AND NEW PROCESSES TO REGAIN SOME OF ZINC'S LOSSES. WE ARE AT A CRITICAL POINT IN RECOUPING SOME OF THESE COSTS, AND A NEW TAX WOULD CRIPPLE OUR RESURGENCE.

BY INVESTING IN NEW TECHNOLOGIES AND IN COSTLY MARKETING

PROGRAMS TO DEVELOP NEW APPLICATIONS FOR THE USE OF ZINC, MANY INDEPENDENT ZINC ALLOYERS HAVE HELPED ZINC RECOVER SOME OF THE U.S. MARKET. MY OWN COMPANY, EASTERN ALLOYS, HAS INVESTED HEAVILY IN THESE PROGRAMS.

CLOSELY RELATED TO THE ECONOMIC DISADVANTAGE THAT A TAX ON ZINC WOULD CREATE IS THE MARKETING DISADVANTAGE THAT WOULD BE CREATED IF ZINC IS BROUGHT UNDER THE "HAZARDOUS SUBSTANCE" UMBRELLA OF SUPERFUND AND DECLARED TOXIC.

IF ZINC IS DECLARED HAZARDOUS IN THE SUPERFUND BILL, CONSUMERS WILL NOT BE AS READY TO BUY CONSUMER PRODUCTS CONTAINING ZINC. ADDITIONALLY, THE U.S. MINT COULD SOON BE CIRCULATING HAZARDOUS MATERIAL IN THE NEW ZINC PENNY WHICH CONTAINS 98% ZINC.

WHEN AN INDUSTRY LOSES ITS COMPETITIVE ADVANTAGE, WHETHER DUE TO A TAX, A DUTY, OR BEING MISREPRESENTED IN THE MARKETPLACE, IT HURTS SMALL BUSINESSMEN LIKE THE INDEPENDENT ZINC ALLOYERS AND, THEREFORE, FORCES THEM TO LAY OFF WORKERS.

THE HOUSE ENERGY AND COMMERCE COMMITTEE, IN ITS REPORT ON H.R. 5640 (HOUSE REPORT NO. 98-890, PART I), COMMENTS THAT THE "NEW SUBSTANCES SUBJECT TO TAXATION WERE SELECTED ON THE BASIS OF THE CRITERIA USED FOR SELECTION PROVIDED IN CURRENT LAW, PLUS SOME ADDITIONAL CRITERIA DEVELOPED IN CONSULTATION WITH EPA."

THE WASHINGTON CONFERENCE FOR ZINC BELIEVES THAT THE NEW SET OF CRITERIA USED TO INCLUDE ALL ZINC FORMS IN H.R. 5640

RESULTS FROM A STUDY PREPARED BY EPA PURSUANT TO SECTION 301(A)(1)(H) OF THE 1980 SUPERFUND ACT.[2] THE DATA IN THE EPA STUDY IS NEITHER SUFFICIENT NOR SPECIFIC ENOUGH TO JUSTIFY INCLUDING ZINC UNDER THE "HAZARDOUS SUBSTANCE" UMBRELLA OF SUPERFUND. THE STUDY RELIES UPON A FINDING OF SOME UNIDENTIFIED FORMS OF ZINC AT NUMEROUS WASTE SITES AND DOES NOT INDICATE THE AMOUNTS OF ZINC OR THE FORMS OF ZINC COMPOUNDS FOUND AT WASTE SITES.

CONGRESS HAS NOT, IN PRIOR ENVIRONMENTAL LEGISLATION, CONCLUDED THAT ZINC IS ENVIRONMENTALLY HAZARDOUS.

ZINC WAS INCLUDED IN THE HOUSE VERSION OF THE SUPERFUND REAUTHORIZATION BILL VIA THE CLEAN WATER ACT. IT IS IMPORTANT TO RECOGNIZE THE CIRCUMSTANCES UNDER WHICH ZINC IS INCLUDED IN THE CLEAN WATER ACT.

UNDER SECTION 311 OF THE CLEAN WATER ACT, THE U.S. ENVIRONMENTAL PROTECTION AGENCY HAS DESIGNATED ONLY CERTAIN ZINC COMPOUNDS AS HAZARDOUS FOR THE PURPOSES OF REGULATING DISCHARGES IN NAVIGABLE WATERS.

ZINC IS LISTED UNDER SECTION 307 OF THE CLEAN WATER ACT FOR PURPOSES OF REGULATING EFFLUENT DISCHARGES. EPA, IN ADOPTING LIMITATIONS UPON EFFLUENTS INVOLVING ZINC, IS REQUIRED TO LOOK AT THE ZINC CONTENT OF EFFLUENTS ON AN INDUSTRY-BY-INDUSTRY BASIS BEFORE ADOPTING ANY RESTRICTIONS. THE CRITERIA DOCUMENT, WHICH EPA IS REQUIRED TO ESTABLISH, REFLECTS THE LATEST SCIENTIFIC KNOWLEDGE ON THE VARIETY AND EXTENT OF ALL

IDENTIFIABLE EFFECTS OF HEALTH AND WELFARE EXPECTED FROM THE SUBSTANCES IN ANY BODY OF WATER.

THE AMBIENT WATER QUALITY FOR ZINC PUBLISHED BY THE EPA IN 1980 STATES THAT "ZINC IS AN ESSENTIAL ELEMENT AND IS NOT A CARCINOGENIC AGENT." THE REPORT FURTHER STATES, "THE TOXICOLOGICAL DATA BASE FOR EVALUATING WATER QUALITY CRITERIA FOR ZINC IS INADEQUATE," THAT, "THERE IS A LACK OF USABLE DATA ON CHRONIC EFFECTS" OF ZINC, AND, "ONE PROBABLE REASON FOR THE LIMITED INFORMATION IS THAT ZINC HAS GENERALLY BEEN ACCEPTED AS A BENEFICIAL SUBSTANCE AND ADVERSE EFFECTS HAVE NEITHER BEEN EXPECTED NOR LOOKED FOR."

ZINC'S INCLUSION UNDER THE CLEAN WATER ACT IS PRIMARILY BASED ON ITS ADVERSE EFFECTS ON CERTAIN FISH AND AQUATIC PLANTS. STUDIES HAVE EXHIBITED TOXICITY TO SOME AQUATIC LIFE IN HIGH CONCENTRATIONS. HOWEVER, AQUATIC LIFE SUCH AS OYSTERS, CRUSTACEANS, AND MOLLUSKS CONSUME AND TOLERATE THESE HIGH LEVELS OF ZINC; HUMANS REGULARLY CONSUME THEM WITH NO HARMFUL HEALTH EFFECTS.

CONGRESS DID NOT INCLUDE ZINC UNDER THE PRIMARY STANDARDS OF THE SAFE DRINKING WATER ACT BECAUSE IT WAS FOUND NOT TO BE A DANGER TO HUMAN HEALTH. ZINC IS INCLUDED UNDER THE SECONDARY STANDARDS WHICH PROVIDE ONLY RECOMMENDED LEVELS BASED ON AESTHETIC CHARACTERISTICS SUCH AS TASTE AND CLOUDINESS.

IN 1980, ZINC, EXCEPT FOR TWO SPECIFIC ZINC COMPOUNDS, WAS EXCLUDED FROM THE SUPERFUND TAX, AND WE URGE THIS COMMITTEE

TO EXCLUDE IT AGAIN. NO ENVIRONMENTAL LEGISLATION HAS BEEN ENACTED BY CONGRESS SINCE 1980 THAT SUPPORTS THE TAXING OF ALL ZINC AS A HAZARDOUS SUBSTANCE FOR SUPERFUND REAUTHORIZATION PURPOSES.

THERE IS NO JUSTIFICATION FOR ALTERING THAT CONGRESSIONAL JUDGMENT AND INTENT. AS IN 1980, THERE IS NO REASON TO BLANKET ZINC INTO THE SUPERFUND TAX AND NO REASON TO TAX ALL OF IT.

THANK YOU FOR THE OPPORTUNITY TO PRESENT THIS TESTIMONY.

FOOTNOTES

[1] MCKEE, J.E. AND H.W. WOLF, "WATER QUALITY CRITERIA," CALIFORNIA WATER POLLUTION CONTROL BOARD, PUBLICATION 3-A, PP. 294-298.

[2] "ANALYSIS OF SUBSTANCES EXEMPT FROM CERCLA TAX PURSUANT TO 301(A)(1)(H) AND ANALYSIS OF A TAX ON COAL-DERIVED SUBSTANCES AND RECYCLED METALS PURSUANT TO 301(A)(1)(L)," PREPARED FOR OFFICE OF EMERGENCY AND REMEDIAL RESPONSE, U.S. ENVIRONMENTAL PROTECTION AGENCY BY ICF INC., NOVEMBER 1983.

The **Chairman**. Senator Moynihan.

Senator **Moynihan**. Thank you, Mr. Chairman. I would like to just make a general statement to thank Mr. Winter for very careful testimony and a nice presentation. And Mr. Bauer has raised a question which Mr. Hansen raised previously. It seems to me that the bill the House has sent us is putting quite punitive taxes on substances you wouldn't want to be without. I mean, we are going to have—with the House bill—a very large tax on potassium hydroxide. It is used in fertilizer. It makes plants grow. This does no harm. And the same thing with zinc. People are made in part of zinc. I think cans are zinc, aren't they? [Laughter.]

Mr. **Bauer**. Yes.

Senator **Moynihan**. What harm has zinc done to anybody?

Mr. **Bauer**. That is really precisely my question.

Senator **Moynihan**. And it is a fair question. Thank you. It is a fair question, and I think this committee should answer it.

The Chairman. Senator Bradley?

Senator **Bradley**. Mr. Bauer, has EPA found zinc or any derivative of zinc at its Superfund sites?

Mr. **Bauer**. It is my understanding that they have found zinc at certain Superfund sites, but they didn't specify what form it was in. It could have been in the form of a new zinc penny that is now circulating. Or it could have been in the form of an automobile carburetor—a carburetor is made out of zinc. They didn't say what form it was in.

Senator **Bradley**. Mr. Winter, has copper been found at any Superfund sites?

Mr. **Winter**. To my knowledge copper metal has not been found at any Superfund site, and even if it had, I don't think it would be significant. You know, we all know about archeological digs 2,000 years ago where we found vast numbers of Roman copper coins. Copper is very inert, almost everlasting. Hence, the use of copper canisters for storing nuclear fuels.

Senator **Bradley**. Does copper—although not toxic—pose any threat to health?

Mr. **Winter**. Copper is a very benign metal. Like zinc, it is an essential ingredient of human health. Again, like zinc, it has some minor toxicity problems in terms of aquatic life. It can be an algacide.

Senator **Bradley**. Thank you.

Mr. **Bauer**. Senator, if I may just carry on, it is my understanding that when a toxic site was identified, a study was then done on everything that was found—every element that was found—at that site, whether toxic or otherwise. And by implication, it appears that any element found in a toxic site is considered toxic, and I think—as one of the previous panel members said—we are on a big learning curve, and we have a lot more to study about what each site is composed of and how it would be taken care of.

Senator **Bradley**. Thank you.

The **Chairman**. Senator Chafee?

Senator **Chafee**. I have no questions, Mr. Chairman. Thank you.

The **Chairman**. Senator Symms?

Senator **Symms**. Mr. Winter, if I understand you correctly, what you are saying is that copper is not a toxic metal. Therefore, it should not be taxed.

Mr. **Winter**. Yes, sir.

Senator **Symms**. I guess the question I would like to direct to both of you—and I know the copper industry, which we don't have in my State, but we do have the lead, zinc, and silver industry, Mr. Bauer, which I think is more under your bailiwick, if I understand from your title and your position—but 100 percent of a tax on nothing is nothing. I think we all understand that. In other words, if they are not producing anything, there isn't anything to it. Now, if I understand the House bill right, the fee imposed on copper, lead, and zinc will jump to $23.68, $27.00, and $12.48 per ton respectively, and this compares with a tax between $187, $414 on cooper sulfate and $8.30. So, it is really a massive increase in the taxes. Now, we have the Bunker Hill smelter that you are aware of in the Silver Valley in Idaho—at Kellogg, ID—that still has been maintained, kept in operation. We have been trying very hard in that State to get that smelter operating again, which is a lead, zinc, and silver smelter, which produced 20 percent respectively of those three metals in the United States. Now, if this tax is imposed on it—they haven't got it restarted yet—they closed it down because of a failure to be able to make a profit—if we don't get it—It seems to me like adding another tax to this right now is just like saying that we never will get it. They will just go offshore to produce these metals. Isn't that really what is happening?

Mr. **Bauer**. Precisely.

Senator **Symms**. Now, the offshore countries don't have to pay the tax. The onshore producers produce it. So, we make an incentive to drive them offshore.

Mr. **Bauer**. Absolutely.

Senator **Symms**. So, the higher the tax, the worse the situation for these producers?

Mr. **Bauer**. Not only for the producers, but speaking for zinc. You would also tend to drive off all of the fabricating industries that use that metal because they also would be taxed. And that tax structure would have to absorb or be passed on in the cost. So, you will find your fabricating industries in a short time being moved offshore to get away from that onerous tax.

Senator **Symms**. Maybe this whole Superfund concept is—I mean since it is people who cause the pollution—we do have 220 million of us living here in the United States we ought to spread it around a lot more widely for sure, if that is the problem. If we all want to collectively clean up the waste dumps, and I don't think anybody opposes that idea.

Mr. **Bauer**. No. I agree with you.

Senator **Symms**. Thank you, Mr. Chairman.

The **Chairman**. Thank you. Let me thank the witnesses again. I will defer any questions at this time, but we will be working with your representatives as we try to see what we can do in the next 10 days. If we can't do it in 10 days, we will do it later, if not this year. Thank you.

We now would like to call the Honorable Claudine Schneider and the Honorable Ron Wyden, and we are very pleased to have our

House members here. We are under some time constraints because of a vote and one additional panel, so we would ask you to limit your statements to 5 minutes each. That is sort of the house rule.

Claudine, do you want to lead off?

STATEMENT OF HON. CLAUDINE SCHNEIDER, U.S. REPRESENTATIVE FROM THE STATE OF RHODE ISLAND

Representative SCHNEIDER. Thank you. Mr. Chairman, I appreciate this opportunity, and I want to thank you and the members of this committee for considering what we consider to be a very fair and efficient way of developing a new funding mechanism for dealing with the problems of hazardous waste, and it is our hope that our comments will be useful.

Let me just quickly say that as a member of the Science and Technology Committee for the last 4 years, it has been very frustrating for me to sit on that committee and to hear engineers and scientists come in time and time again and say we have the technological capability of recycling and reusing our hazardous waste. So, as a result, we developed this legislation to push for a waste-end fee, and Congressman Wyden, my colleague over on the Energy and Commerce Committee, and I both have been working very hard to see this implemented. There are basically two overall benefits to the waste-end approach. First of all, additional revenue for cleanup would be generated, and we would as a result have a broadened tax base for our Superfund program.

Second, it would provide an economic incentive. As one of the earlier witnesses, Mr. Hansen, had indicated, with a strong regulatory structure, we will be able to reduce the reliance on land disposal and this type of economic incentive will lead to more recycling and reuse and the end of hazardous waste sites. I think that many of those who agree with us on this waste-end approach recognize that it would be very short-sighted to reauthorize Superfund without taking steps to encourage environmentally preferable waste disposal methods. However, what I would like to do is to focus on some of those people who find objections to the waste-end proposal, and I would like to share with you our responses which Congressman Wyden and I will briefly touch on.

First of all, some of you have raised the questions of administrative feasibility of the waste-end. Let me share with you that the waste-end tax can be easily administered. The taxable parties can be identified, and the tax can be efficiently administered from those parties. The manifest system which currently exists in RCRA allows us to keep a very rigid account of both the quality and the quantity of toxic waste that is disposed of. At each disposal site, an operating log records disposal and storage activities. This manifest system would be used as the basis for the administration of the waste-end tax, so that recycling and treatment of various activities would be exempted from taxation. The taxable event is the actual receipt of hazardous waste for disposal or storage at a RCRA-approved facility. This is an important point to understand because the waste-end should not be collected directly from waste producers but rather from the disposal facilities. Right now there are 4,800 registered on and offsite disposal facilities nationwide. However, the waste disposal industry is highly centralized. EPA studies indicate that 95 percent of all the treatment, storage, and disposal takes place at only 240 facilities nationwide. The tax now is easily collected directly from the disposal facility and can be efficiently administered. For the past 10 years, such States as California have had little difficulty in the administration of the waste-end fee. That is one of the big questions. Another question was the reliability of the revenue. An important issue is whether a functioning waste end tax would eventually force all waste producers away from land disposal and dry up the revenue. My response there is twofold. First of all, this will only supplement the feedstock tax. It is not a replacement at all for the feedstock. Second, the more important individual States experience with the waste-end clearly proved that the tax is able to meet the desired revenue goals, and I am happy to share with you—hot off the presses—a summary, an Executive summary, from the Environmental Protection Agency from Mr. Lee Thomas, and Mr. Chairman, with your leave, I would like to have the opportunity to submit this to the record. We just got this late last night, and it gives a summary of the experiences of many of the States that have been utilizing a waste-end approach and their success with it And the third point that I will quickly share with you is that there are some international trade ramifications that have been raised in the questions. I think that it is important to note that the waste-end ability to affect the American companies that are competing in international markets is really minimal. As a matter of fact, EPA's Office of Policy Analysis recently did a study with the waste-end tax at a rate of $10 per metric ton, and they concluded that the annual cost of production for virtually every industry in the United States would be less than 2 percent.

So, some of the witnesses who were testifying immediately before us about the zinc and the copper industries, I think it is important to note that the waste-end tax will reduce the pressure to significantly increase the feedstock tax which is currently applied to a very small number of industries, namely the zinc and copper industries. And there is some question as to whether those small industries are being unfairly taxed and to an extent that is rather extreme. So, in conclusion, when we recognize that 75 percent of all of our hazardous waste can be recycled or reused, when we recognize that the waste-end tax will merely supplement the revenues for the Superfund, and we recognize that unless we begin immediately to put this mechanism in place, we are not only going to be cleaning up, for example, a hazardous waste site in Rhode Island and taking those toxic wastes perhaps to New York to another site, but we are going to need additional revenue to continue to rearrange the deck chairs on the Titanic, because this is a problem that seems to be nonending. What we have to do is to stop the problem from the outset with an innovative new approach known as the waste-end fee. And I am very hopeful that, by looking at our responses to many of the questions or objections raised, that this committee will take action ASAP. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you. Congressman Wyden?

[Representative Schneider's prepared written statement and Mr. Lee Thomas' EPA executive study follow:]

STATEMENT OF THE HONORABLE CLAUDINE SCHNEIDER (R-RI)
SUPERFUND REAUTHORIZATION
COMMITTEE ON FINANCE, UNITED STATES SENATE
September 21, 1984

MR CHAIRMAN AND MEMBERS OF THE COMMITTEE

Thank you for providing Congressman Wyden and me with the opportunity to testify today. I am confident that you will use your unrivaled expertise in tax policy to design a fair and efficient funding mechanism to expand Superfund. I hope that our comments are helpful to you in accomplishing that task.

For more than a year now, Congressman Wyden and I have been pushing the waste-end tax as a supplement to the feedstock tax in Superfund. We believe that addition of a waste end tax will have two significant benefits:

1). a waste-end will provide additional revenue for the cleanup of the thousands of toxic waste sites nationwide, and will broaden the tax base for the Superfund program.

2). the waste-end will put in place an economic incentive which, in collaboration with a strong regulatory structure, can reduce the continued heavy reliance on land disposal of toxic waste.

In pushing this proposal, we have won the support of a great many colleagues who agree that it is shortsighted to reauthorize Superfund without taking steps to encourage environmentally preferable waste management practices.

As is to be expected, we have also encountered some objections to the waste end proposal. It is these objections, and our responses, which Congressman Wyden and I would like to briefly share with the Committee.

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1. ADMINISTRATIVE FEASIBILITY OF WASTE END

The most obvious question to be asked is, can the waste end tax be easily administered? Can the taxable parties be identified and the tax efficiently collected from those parties?

The answer to this question is a resounding yes.

The manifest system already in operation under RCRA requires that waste disposers keep a rigid account of the quality and quantity of toxic waste that is disposed. At each disposal site, an operating log records disposal and storage activities. This manifest system would be used as the basis for administration of the waste-end tax. The tax would be applied on all forms of land disposal as defined under RCRA, with RCRA approved recycling and treatment activities exempted from taxation.

The taxable event is the actual receipt of hazardous waste for disposal or storage at a RCRA approved facilities. This is an important point to understand. The waste-end should not be collected directly from waste producers, but instead should be collected from disposal facilities.

There are currently 4,800 registered on and off-site disposal facilities nationwide. Moreover, the waste disposal industry is highly centralized. According to the EPA, 95 percent of all treatment, storage, and disposal takes place at only 240 facilities.

A waste-end tax which is collected directly from the disposal facility could be easily and efficiently administered. The State of California has had such a disposer tax in operation for the past ten years, and has experienced little difficulty in administration.

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II. RELIABILITY OF REVENUES

Another important issue is whether a functioning waste-end tax will eventually force all waste producers away from land disposal, and dry up the revenue available for cleaning up toxic waste sites already in existence.

My response to this is twofold: First, the waste-end should be included as a supplement to the the feedstock tax, not as a replacement. This will guarantee a steady flow of revenue for the Superfund program.

Second, and more importantly, individual state's experience with the waste-end clearly proves that the tax is able to meet the desired revenue goals. I received just yesterday from EPA the results of a major survey of several states that have already instituted a waste-end tax. The draft summary of this report concludes:

> "In six states, waste-end taxes had generated revenues between 78 percent and 98 percent of projections; in three states, revenues were ahead of projections."

For comparison, the current feedstock tax generated between 74 percent and 84 percent of projected revenue during its first three years.

Clearly, the waste-end can meet desired revenue goals. The state's experience can serve as a guideline to help us avoid potential administrative problems. Without objection, Mr. Chairman, I would like to include the Executive Summary of this report in the Committee record.

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III. INTERNATIONAL TRADE RAMIFICATIONS

Members of this Committee are understandably concerned about the effect of the waste-end on the ability of American companies to compete in international markets.

A recent study by the EPA's Office of Policy Analysis indicates that a waste-end tax at a rate of $10 per metric ton--a rate which I consider sufficient to raise desired revenues if applied on a wet weight basis--would increase the annual cost of production for virtually every industry in the U.S. by less than two percent.

Let me also reemphasize, Mr. Chairman, that the waste-end tax will reduce the pressure to significantly increase the feedstock tax, which is currently applied to a relatively small number of industries, several of which are fighting for their lives against foreign competition.

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Mr. Chairman, according to the Office of Technology Assessment (OTA), 75 percent of the waste that is disposed on or in the ground today could be safely recycled, treated, or reused. Yet, because the cost is relatively low, land disposal remains by far the cheapest disposal method.

The waste-end tax can alter this situation by giving managers a marketplace incentive to switch to environmentally preferable treatment methods. Unless we dramatically increase the use of recycling and treatment technologies, we risk creating additional dangerous waste sites, which will require even more Superfund money to cleanup in the future.

The waste-end tax offers us a way out of this cycle. It works, and I hope that the Committee gives it favorable consideration.

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A Survey of State
Experiences with Waste-End Taxes

Office of Policy Analysis
U.S. Environmental Protection Agency
September 1984

DRAFT

SURVEY OF STATES WITH WASTE-END TAXES

EXECUTIVE SUMMARY

In the summer of 1984, EPA conducted a survey of the waste-end tax programs in eight states. In attempting to determine how the programs would affect revenues, administrative resources, and waste disposal practices, EPA learned the following:

- In six states, waste-end taxes had generated revenues between 71% and 98% of projections; in three states, revenues were ahead of projections. (For perspective, the Superfund feedstock tax has generated between 78% and 84% of revenue projections over its initial three years.)
- Previously reported shortfalls in initial revenues from waste-end taxes were primarily due to inadequate data on actual waste volumes, overall economic recession during the period of startup, failure to accurately account for the costs of tax exemptions, and lack of programmatic resources during startup.
- States have experienced administrative problems with waste-end taxes that EPA should consider in designing a federal tax program. They are:
    - insufficient training for tax collection personnel in understanding of regulatory coverage of hazardous wastes under state and federal statutes;
    - insufficient staff in enforcement, inspection, and collection; and
    - insufficient resources for computer data bases to aid the collection and enforcement process.
- In four states, waste management changes occurred in the regulated community after the waste-end taxes were imposed. The changes included increases in recycling, incineration, and treatment, as generators reduced land disposal practices. However, it would be very difficult to ascribe the changes to the taxes alone because of the low rates and the existence of other regulatory and nonregulatory incentives for better waste management.
- There appears to be no difference in levels of illegal disposal between states with or without waste-end taxes.

STATEMENT OF HON. RON WYDEN, U.S. REPRESENTATIVE FROM THE STATE OF OREGON

Representative WYDEN. Thank you very much, Mr. Chairman and members of the committee. I think Representative Schneider has very clearly outlined the case, and I just want to touch very quickly on two points that I think are going to be important to your deliberations. The first is what would be the impact of a waste-end tax on the incidence of midnight dumping or underreporting of hazardous waste? And the second issue that I think is relevant is what are the relative merits of assessing a waste-end tax on a dry weight basis rather than on a wet weight basis? First, let me turn very briefly to the midnight dumping question. We know this is a serious problem. It is going to be a serious problem under any circumstance, and I think the issue is really, first, is a waste-end tax going to make things worse? And I happen to think it won't. We really need to explore the issue in two ways. First, the question would be are those people who are currently complying with RCRA going to stop complying as a result of a waste-end tax? We believe not. Firms that are currently complying with the law are not going to be persuaded, in my view, to ignore the law, especially when faced with a new set of penalties if they violate the waste-end tax. They would literally in that case be faced with violations of both an environmental statute plus tax penalties on top of it. Moreover, we have some valuable experience from the State of New York. A December 1983 report by their Department of Environmental Conservation stated, and I quote here: "To date generators who manifested their waste have demonstrated excellent compliance with the payment of the Superfund assessments." So, I think it is not going to cause people who are now complying to suddenly go out and ignore the law.

The second part of the midnight dumping question, is whether those who currently violate RCRA will be persuaded to comply with RCRA and with the waste-end tax. Now, at present we really don't know how serious the problem is in this area, but I think it is the view of Congresswoman Schneider and I that a waste-end tax does have the potential to bring existing violators into the system. And very briefly, what I would say is that we are taking away none of the existing enforcement tools. Nothing is being taken away. What we are doing is adding yet another tool. Those who are presently violating one statute would now be faced with the prospect of violating two, and I think that would be a more chilling prospect than they now face. And so, I think it does give us an additional handle on getting those who are presently violating the rules, to bring them into compliance.

The last point that I want to make, Mr. Chairman and members, on the midnight dumping issue is that I think we ought to refer to a January 1984 EPA study of the States' experience with waste-end tax. The EPA study was done really specifically to confirm or deny claims that had been made that waste-end taxes do cause midnight dumping and illegal disposal. Here again, I would quote from the report, Mr. Chairman: 'The analysis did not show any difference in illegal disposal between the States with and those without a waste-end tax."

Let me turn now if I might to the issue of dry weight. I think you are going to hear a lot about this as you look at the merits of the case. Simply stated, it means that we would ignore the water content of the waste for tax purposes. Congresswoman Schneider and I have looked very closely at the merits of this concept. We believe that a dry weight basis ought to be rejected. We think a dry weight basis literally does nothing more than to reduce revenues that come into the program, and it also would increase the complexity of administering the tax. I would like to speak very specifically to why we oppose the dry weight, there are four reasons. First, we think it would create an undue administrative burden in implementing a waste-end tax. A December 1983 EPA study bolsters this point with a conclusion that a dry weight basis would require more regulation writing and impose testing costs for up to $70 per drum of waste. According to the study, it would also enhance the opportunity for violation without detection, increasing the personnel and resources needed to enforce the tax. The second reason we oppose dry weight is that the proper adjustment of tax liability between high-volume liquid waste versus solid waste can be addressed through a lower tax rate for liquid waste and through an exemption of waste water treatment that is covered under the Clean Water Act. Mr. Chairman, if I may just take a few seconds and wrap up?

The CHAIRMAN. Yes, and then I think that is it.

Representative WYDEN. Taxing on the dry weight of a liquid waste is misleading in that it suggests there is no potential harm from the water associated with the liquid waste. Finally, and the last point is it would dramatically reduce the revenues to be derived from the waste-end tax by, in essence, exempting one of the most widespread practices of land disposal of hazardous waste.

The last point I would make, Mr. Chairman, is that what we have in this country today is literally a toxic waste merry-go-round. What we do is just move this waste from one site to another, rather than concentrating on a process for not producing it in the first place. And what Congresswoman Schneider and I want to do is give corporate managers in this country a bottom line financial incentive to not produce it so we can get off this toxic waste merry-go-round where we just haul it from one site to another, and when it leaks at the site where we have left it, we keep it there a while, and then we take it to another. Thank you, Mr. Chairman.

[The prepared statement of Congressman Ron Wyden follows:]

Congressman Ron Wyden
Testimony on the Superfund Reauthorization
Senate Finance Committee
September 21, 1984

Mr. Chairman, Congresswoman Schneider has eloquently presented the case for a waste-end tax and the administrative feasibility of such a tax. I would like to briefly respond to two issues that you may consider in your deliberations over financing the Superfund. They are: what impact will a waste-end tax have on the incidence of midnight dumping or underreporting of hazardous waste; and what are the relative merits of assessing a waste-end tax on its "dry-weight" versus "wet-weight" basis.

It is important to bear in mind that the problems of midnight dumping and underreporting of hazardous waste are not unique to a waste-end tax. Indeed, these problems are part and parcel of the hazardous waste regulatory program.

Rather than exacerbate the problem, we believe a waste-end tax will prove to be an invaluable tool for cracking down on midnight dumpers and underreporters of hazardous waste.

The real question is: Will a waste-end tax make the problems of midnight dumping and underreporting of hazardous waste worse than they are now?

The question has to be examined in two parts: First, will those who currently comply with RCRA stop complying as a result of a waste-end tax?

We believe not. Firms that are currently complying with the law will not be persuaded suddenly to ignore the law, especially when faced with the new threats of tax penalties and tax audits. As evidence, consider the State of New York's experience with a waste-end tax.

A December 1983 report by the New York Department of Environmental Conservation finds that:

> "To date, generators who manifested their waste have demonstrated excellent compliance with the payment of the Superfund assessments".

The second part of the question is whether those currently violating RCRA will be persuaded to comply with RCRA and with a waste-end tax.

At present, EPA has no idea how large of a problem we are talking about in this category.

It is our view, Mr. Chairman, that a waste-end tax has the potential to bring present violators of RCRA into the system. With a waste-end tax, midnight dumpers would now be faced with violating both an environmental law and the Internal Revenue Code of the United States -- certainly a more chilling prospect to some.

This point is underscored by those on the front-lines in the war against midnight dumpers. Michigan's environmental enforcement supervisor, William M. Murphy, in a November 1983 article for the FBI Law Enforcement Bulletin, makes the point that many of our citizens seem to believe that environmental statutes should be enforced on a "gentleman-to-gentleman basis", he states that:

> "The philosophy still quite prevalent in the criminal justice system, business community, political arena, and engineering and scientific circles is that environmental laws should not be enforced in the same manner as "regular" criminal law classifications."

Inevitably, some producers of hazardous waste will choose to operate outside the law -- as they do now -- regardless of the existence of a waste-end tax. To identify these midnight dumpers, strong enforcement efforts are needed, period.

In fact, a waste-end tax will provide enforcement officials with another tool to obtain convictions: failure to pay taxes.

Senator Roth and Chairman John Dingell, among others, have been instrumental in highlighting the increasing attraction of organized crime to the illegal waste disposal business.

To combat this growing influence, we certainly cannot ignore our long history -- from Al Capone onwards -- of obtaining successful convictions of organized crime on the basis of violations of income tax and other tax laws. Indeed, all too often in organized crime, this is the only charge prosecutors can make stick.

Finally, Mr. Chairman, we refer the committee to a January, 1984 EPA study of the states' experience with waste-end taxes. The EPA study was done, in part, to confirm or deny claims that have been made that waste-end taxes cause illegal disposal.

In the words of the report:

> "The analysis did not show any difference in illegal disposal between the states with and those without a waste-end tax."

Let me now turn to one proposal you will no doubt hear much more on in the days ahead: assessing a waste-end tax on the basis of its "dry" rather than "wet" weight. Simply stated, it means ignore the water content of the waste for tax purposes.

Congresswoman Schneider and I have examined the merits of "dry" weight approaches and have concluded that a "dry" weight basis should be rejected. A dry weight basis would serve no other purpose other than to reduce the revenues coming to the Superfund and to increase the complexity of administering the waste-end tax.

We oppose "dry" weight for four straightforward reasons:

> 1) It would create an undue administrative burden in implementing a waste-end tax. A December 1983 EPA study bolsters this point with its conclusion that a dry-weight basis would require more regulation writing and impose testing costs of up to $70 per drum of waste. According to the study, it would also enhance the opportunity for violation without detection, increasing the personnel and resources needed to enforce the tax.
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> 2) The proper adjustment of tax liability between high volume liquid wastes versus solid wastes can be addressed through a lower tax rate for liquid wastes and through an exemption of wastewater treatment that is covered under the Clean Water Act.
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> 3) Taxing on the "dry" weight of a liquid waste is misleading in that it suggests there is no potential harm from the water associated with the liquid wastes.

4) Finally, it would dramatically reduce the revenues to be derived from a waste-end tax by, in essence, exempting one of the most widespread practices of land disposal of hazardous waste.

You will be told that underground injection is the safest form of land disposal and should therefore be encouraged. I would point out that underground injection is not without its own horror stories -- such as the recent leaking wells in Ohio that resulted in the levying of a $10 million penalty against the disposal firm.

But more to the point: the waste-end tax is not intended to encourage one form of land disposal over another. Rather, its most basic purpose is to discourage all land disposal, period.

To conclude, this nation needs to create direct economic incentives to bring about positive changes in the way we -- as a society — manage our hazardous waste. We are convinced that a waste-end tax will accomplish this objective and is an appropriate, effective and substantial step to avoid mortgaging our future with endless waste cleanup demands.

Reliance on a feedstock tax and taxpayer funds alone only perpetuates the status quo, which is a "toxic waste merry go round" where taxpayer money is spent moving hazardous waste from one Superfund site to another landfill. As recent articles in the Washington Post and Wall Street Journal have highlighted, these new landfills soon leak or otherwise fail, thus becoming the Superfund sites of the future -- for which of course Congress will be expected to raise even more cleanup money.

There is no such thing as a safe landfill or underground injection well. Absent a waste-end tax, however, land disposal will remain the cheapest disposal option -- certainly cheaper than recycling, reuse or process changes that the waste-end tax promotes.

Regulation on top of regulation alone will not rid America of hazardous waste. All too often it simply pushes it out of sight.

RCRA provides us with a strong regulatory system for the "cradle-to-grave" management of hazardous waste. But we believe a strong regulatory program which is complemented by a bottom-line economic incentive to produce less waste will produce even better results.

What more powerful incentive is there than one which says: Those who produce less waste pay less taxes?

In short, the waste-end tax produces many plusses and few minuses. We hope you agree.

Thank you again for letting us have the time to present our views.

The CHAIRMAN. Thank you. Senator Moynihan.

Senator MOYNIHAN. Mr. Chairman, I want to thank our distinguished colleagues and friends for coming. As you may know, I have introduced a waste-end tax that is very much along the lines you have discussed. May I just say to both of you that the discussion of revenues keeps coming up, and an ideal waste-end tax wouldn't produce any revenue at all because people would have gotten rid of their waste within their own operations as a form of technical efficiency, as Mr. Hansen observed, as occurred with energy consumption. When it became more expensive, they used less of it. And I think we finally have an opportunity to have a genuine pollution tax. We have been talking about this for 15 years and have never done it. Now, here is the chance. Thank you.

The CHAIRMAN. Senator Bradley.

Senator BRADLEY. No questions, Mr. Chairman, other than to thank the two witnesses for their thoughtful testimony.

The CHAIRMAN. Senator Mitchell.

Senator MITCHELL. No questions, Mr. Chairman. I also thank Ms. Schneider and Mr. Wyden for their very thoughtful testimony. It will be useful in our deliberations.

The CHAIRMAN. Senator Chafee.

Senator CHAFEE. Thank you, Mr. Chairman. I want to thank the witnesses for a very thoughtful analysis and also for producing the recent report from EPA on this subject. I found what each of the distinguished Congress people had to say on this very illuminating, and I think it is going to be very helpful in our deliberations. So, I am glad you came. Thank you.

Representative SCHNEIDER. Thank you.

The CHAIRMAN. Senator Danforth.

Senator DANFORTH. No questions.

The CHAIRMAN. Senator Symms.

Senator SYMMS. I want to thank both the witnesses for being here and for their contribution to the committee, Mr. Chairman, and also just to ask unanimous consent that, since Dow Chemical has done a lot of work on this specific subject that the two Congresspersons spoke of and they could not testify today, but they would like to submit for our record some of the work that they have done on the impact of a waste-end tax, which in fact they do favor.

The CHAIRMAN. I also would like to say that it is very nice to have the House Members over here, as you can see, and we don't ask any tough questions. You did an excellent job, and we appreciate it very much. We are, I think, sympathetic to the views you both expressed—at least I am. And I think that has been expressed by nearly every member of this panel. We are, as I have indicated earlier, trying to figure out if we can do anything yet this year, although it is going to be very difficult. And we appreciate your input. Thank you.

Representative SCHNEIDER. Thank you very much.

The CHAIRMAN. Our next panel is James Fitzgerald, vice president, and Bob Carlstrom of St. Joe Minerals. I guess Mr. Appleby is appearing for Hercules rather than Mr. Hendricks. Katharine Caples of Federal governmental affairs, AMAX, Bob Campbell, manager of corporate services of the Lithium Corp., and Mr. Flora, vice president of the eastern region of Shell Refining & Marketing Co.

Let me indicate that there were many other witnesses who wanted to testify. We think we have had a fairly broad representative group covering nearly every area, and much of it would have been repetitious, but if there are statements that any corporate entity would like to file or any individual, or any environmental group or whatever, we would be pleased to have those statements. We will need them rather quickly if we are going to be able to consider their content. Mr. Fitzgerald. And let me also indicate that your entire statements will be made a part of the record. We hope you can summarize. This is the last panel, and Senator Symms has agreed since I have to leave here in about 10 minutes that he would complete the hearing.

[The Dow Chemical Co. prepared statement follows:]

STATEMENT OF
GLENN W. WHITE, DIRECTOR
CORPORATE TAX DEPARTMENT
THE DOW CHEMICAL COMPANY

SUBMITTED TO THE
COMMITTEE ON FINANCE
UNITED STATES SENATE
ON SUPERFUND REAUTHORIZATION

SEPTEMBER 21, 1984

EXECUTIVE SUMMARY

I am Glenn W. White, Director of the Tax Department of The Dow Chemical Company. I want to make three basic points, focusing on the tax aspects of Superfund.

1. The funding levels contained in the House Bill (HR 5640) and Senate Bill (S 2892) are too large to be efficiently spent.

    - A sound level of annual funding for orphaned site cleanup is $850 million
    - Existing law provides for annual funding of $350 million
    - Not all of this has been used
    - EPA does not believe it can efficiently use the $2 billion funding level provided by the House Bill

2. The feedstock tax is a piece of bad tax policy.

    - The tax base is too small to provide the revenue needed over the long term
    - Three companies pay 30% of the tax; 12 companies pay 70% of the tax
    - As the rate grows, the tax base disappears
    - For the affected chemicals, in the short-term, U.S. production is lessened; and in the long-term, production facilities will not be built in the United States
    - General revenue participation must become the key financing component

3. Waste-end tax is sound and workable and its inclusion would be a vast improvement over the existing tax mechanism.

    - It broadens the tax base
    - It relates the cleanup cost of orphaned waste sites to the tax providing funds
    - It provides a strong incentive to improve waste disposal management practices

Thank you for permitting us to share our views with you.

My name is Glenn W. White and I am the Director of the Tax Department of The Dow Chemical Company. Dow continues to support reauthorization of the Superfund. We recognize that there is an ongoing need to cleanup orphaned hazardous waste sites. It is important to keep in mind the fact that the Superfund tax is aimed at the cleanup of orphaned hazardous waste sites. This cleanup, by itself, will be an expensive operation. The tax provisions used to provide funds for cleanup need to be adequate for the task and should remain unburdened by other peripheral activity.

I have three principal points to make concerning the Superfund tax:

1. The funding levels contained in the House Bill, HR 5640, and Senate Bill, S 2892, are too large to be effectively spent.
2. The feedstock tax is a piece of bad tax policy.
3. Waste-end tax is sound tax policy and its inclusion would be a vast improvement over the existing tax mechanism.

Funding levels are too large. We are convinced that an annual funding level of $850 million to $1 billion per year, including general revenue participation, for each of the next five years is sound. It represents a fund that uses the existing, accelerating program for orphaned site cleanup with reasonable room for growth. A hastily constructed bill at higher funding levels is likely to end up diverting Superfund resources from the urgent purpose of orphaned haardous waste sites to questionable plans for compensating possible victims exposed to waste, assessing health effects, responding to ill-defined leakage of underground storage tanks and responding to citizen group lawsuits.

This view is predicated on the fact that existing law provides for an annual funding level of about $350 million per year. Currently, the Superfund has an unspent balance of $578 million. For fiscal 1985, Congress recently approved a $620 million budget for Superfund. It seems unwise to levy taxes beyond the current needs of government.

HR 5640, as passed by the House, would provide a funding level of about $2 billion annually, roughly six times as much as the original authorization. S 2892, as reported out of the Senate Committee on Environment and Public Works, would provide a funding level of about $1.5 billion annually, roughly four times as much as the original authorization.

Two important concerns arise in respect of these funding levels. First, not all of the funds would be used to cleanup orphaned dump sites. The proposed laws, if enacted, would expand peripheral governmental functions not directly related to the cleanup program, which would be financed by this special tax on a narrow segment of the U.S. economy. Second, the explosion in size of the fund would be the equivalent of throwing money at a problem whether that money can be used in an efficient fashion. The past suggests the funds cannot be well used at the rate the House of Representatives has mandated. Our fear is that the funds will be wasted by inefficient expenditures and by over payment for the services rendered in the cleanup process.

The Environmental Protection Agency has on two recent occasions indicated that an annual funding level of $1 billion is about all it can efficiently spend in the near future.(1) EPA Administrator Ruckelshaus has warned that "additional infusions" of funding beyond EPA's capabilities could impede the growing momentum and halt the progress of the cleanup program.

More than doubling the existing available revenues from $350 million to $850 million seems to be a reasonable increase. This is particularly so in light of the activity to date.

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(1) Testimony of Lee A. Thomas, Assistant Administrator for Solid Waste and Emergency Response, EPA, before the House Committee on Ways and Means on July 25, 1984 and the Senate Committee on Environment and Public Works on September 12, 1984.

Feedstock Tax-Bad Policy. The present tax on feedstock represents bad tax policy. At relatively low levels of incidence it is acceptable because the economic mischief it causes is limited. At the levels proposed by HR 5640, its effect on the U.S. chemical industry is decidely adverse.

On a policy basis the tax base is too small. Under the present law, three companies pay nearly 30 percent of the tax and twelve companies pay about 70 percent of the tax. Obviously that is a very narrow tax base. Even if the impact of the present tax did no damage to the position of these taxpayers, it is clear that they cannot and should not carry a higher tax burden.

Even as presently structured, the tax is so significant to the relatively small base that it acts as a penalty on the activities using the affected feedstocks. Penalty taxes have been used to economically proscribe undesirable activity. If the activities that use the taxed feedstocks were undesirable, then perhaps the tax would be suited to its use, which would be to eliminate the activity from the taxing jurisdiction. Certainly the intention of Superfund at origination was not to drive the production of vital chemicals from our shores.

Moreover, the use of chemical feedstocks upon which the tax is levied are not demonstrably associated with the hazardous materials improperly disposed of in orphaned dump sites. What is being done by the feedstock tax is to punish production not generally associated with the undesirable problem. That cannot be good tax policy.

The feedstock tax is a tax that commits suicide. As the tax rate grows, the tax base disappears. Thus over time, revenue estimates will surely fall short and the problem to be financed by the tax will remain unsolved.

In the recently adopted House Bill (HR 5640) the revenue to be raised from chemical feedstock taxation would average $800 million per year over a five-year period. That represents more than 5 percent of the revenue and more than 100 percent of the income of the part of the industry being taxed.

The impact of the taxation at such levels is clear and can be divided into two parts. The short-term effect is that materials produced in the United States will either be much less profitable than non-U.S. produced goods or will be higher priced than foreign produced items. For manufacturers with U.S. and non-U.S. locations, it means production preferences will be given to foreign produced goods to the extent economics dictate such alternatives. For manufacturers with only U.S. production facilities, the opportunity to produce for non-U.S. markets will be virtually foreclosed and U.S. market share will be lost to foreign manufactured goods. Clearly not all U.S. production will be shut down. But export markets, vital to restoring a positive balance of trade balance of trade, will be lost. In addition U.S. manufacturing will lose U.S. sales to foreign produced goods.

It is important to note that large-scale petrochemical capacity is under construction in Canada and Saudi Arabia. The new facilities are expected to be operational by 1987, adding to overall world ethylene production capacity.

The short-term effect is relatively insignificant compared to the long-term effect. In the short-term, chemical companies are captives of their own investment and economics will dictate substantial, but diminished, use of facilities already in place. However, when new plant capacity is built the impact of taxes which destroy profitability will almost certainly shut down any U.S. growth and shift it overseas. Whether U.S. firms participate in that foreign growth is a separate issue.

This capital erosion is slow, but its occurrence is almost certain. However, once capital is invested a reversal of the bad tax practice does not reverse the investment already made in other countries. Those jobs are lost to the United States as long as the foreign built plant remains in existence. The potential exports from what might have been from a U.S.-based facility will never materialize. Eventually the foreign-based facilities will sell into U.S. markets shutting out U.S. capacity.

There are defensive measures that government can adopt to neutralize this scenario. Taxes can be imposed on derivative components to equalize foreign and domestic competitive positions. To the extent the derivatives are substantial cost factors in the next tier of production, such tax may accelerate the movement to offshore manufacturing. To the extent this occurs, more jobs and foreign trade are lost.

It has previously been reported that the Internal Revenue Service and Treasury Department praise the feedstock tax for its ease of administration. Of course a tax that raises most of its revenue from a few taxpayers and in gross has only a few hundred taxpayers is easy to administer. Clearly that is no measure of the quality of the tax. There has been in recent years a growing pressure to impose taxes that involve few taxpayers for the ease of administration. We suggest Congress examine the question of whether that is really sound tax policy. Frankly, we doubt it. Selecting a few persons as the objects for taxation has the potential for serious discrimination. It is likely to be destructive to the group being taxed. Moreover, it is burdening the people for the convenience of government. Finally, it clearly evokes all the horrors of the tyranny of the majority over a small minority. You should avoid that choice.

Waste-End Tax Makes Sense. Once more we urge that Congress focus on the original purpose of Superfund. As envisioned, Superfund was designed to help finance the cleanup of orphaned waste sites. The generation and storage of waste is the current analogue to the old dump site question.

Taxing the disposal of hazardous wastes encourages the reduction in the amount of wastes that require disposal. It is an incentive for sound waste management practices. In addition, while taxing disposal, but not taxing treatment, recycling or reuse, encourages companies to reduce hazardous waste volumes by treating rather than disposing of their wastes. A reduction in the volume of disposed hazardous wastes will, in itself, contribute to the resolution of the types of problems Superfund was originally intended to address.

There are several basic requirements for a workable and effective waste-end tax system. The Resource Conservation and Recovery Act (RCRA) provides the framework for a workable waste-end tax. In designing a workable system, there are key elements that are necessary:

- The taxable material should be hazardous waste either listed or defined by RCRA.

- The taxpayer should be the owner or operator of qualified disposal or storage site facilities. The number of potential taxpayers is limited to less than 4000, which aids the administrability of the tax.

- The taxable activities should be the disposal or long-term storage of hazardous wastes. Disposal methods would include landfills, deep-well injection, land treatment, use of surface impoundments, use of waste piles and ocean dumping. Long-term storage should be the storage of hazardous wastes for longer than one year.

- No tax should be imposed on waste treatment, recycling or reuse. As mentioned earlier, these tax-exempt activities promote responsible waste management alternatives.

- The established manifest and site operating records, as required under RCRA, would provide a verifiable history of transactions and events. These record requirements provide the audit trail for enforcement and collection.

- High volume, low toxicity wastes, as currently exempted from RCRA, should not be recognized as taxable hazardous wastes under this proposed system. These wastes would include mine tailings, cement kiln dust, drilling fluids and utility wastes.

- The tax imposition should be as a single rate per ton on a dry weight basis. In the alternative, a schedule of differing rates for various disposal methods could provide a dry weight equivalent basis.

In a study recently released by the Office of Technology Assessment (OTA), it concluded that "... OTA and others find the waste-end tax worthy of serious consideration..."(2) The study further concluded that it is possible to structure a simple waste-end tax on the federal level that raises annual revenue in excess of $300 million. In recent testimony before the House Committee on Ways and Means,

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(2) Statement of Dr. Joel S. Hirschhorn, Senior Associate OTA, for the hearing record before the Senate Committee on Environment and Public Works, on September 10, 1984.

Howard J. Hoffman stated that, "If it is adopted, I believe it can be devised to be fairly workable."(3)

Today, most Americans want hazardous waste sites cleaned up. They do not realize the enormous cost. A waste-end tax squarely focuses the cleanup cost on all disposers who put the environment at greatest risk by disposing of their waste in the land.

Summary. We make three points in this testimony:

- The size of the fund created under HR 5640 is too large. A more reasonable fund size would be $850 million to $1 billion per year, including general revenue participation.
- The feedstock tax is bad tax policy because the tax base against which it is levied is too small to support the funding levels already contained in proposed legislation.
- The waste-end tax is a fair, appropriate, and workable levy.

Thank you for permitting us to share our views with you.

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(3) Testimony of Howard J. Hoffman, Attorney, before the House Committee on Ways and Means on July 25, 1984.

STATEMENT OF JAMES L. FITZGERALD, VICE PRESIDENT, TAX, ST. JOE MINERALS CORP., WASHINGTON, DC

Mr. **Fitzgerald**. Thank you, Mr. Chairman. I am vice president of taxes for the St. Joe Minerals Corp. To my right I have Bob Carlstrom, manager of legislative affairs here in our Washington office. I am going to propose something a little bit different than what is being discussed today. I am going to urge that the committee adopt a low rate broad-based corporate surtax as the funding mechanism for Superfund and abandon the so-called feed-stock tax approach. By this, we mean a small tax imposed upon the corporations' U.S. tax liability net of all credits. In other words, it is a tax on a tax. Superfund was created to clean up abandoned hazardous wastesites. By abandoned, we mean wastesites that were generated by businesses that no longer exist or cannot be identified. In other words, there is no responsible party to come forth and bear the costs of these cleanups at the sites. The feed-stock tax approach asks a very few companies to shoulder the financial burden for these sites, and I submit to this committee that the surtax approach is a better way of funding. The feed stocks that have been identified by the House are the basic building blocks of our society. Our industrial community has benefited as a whole from them, and we feel it should help bear the cost for the cleanup of these orphan sites where there is no responsible party. I might also add that we feel the expanded feed-stock tax, as enacted by the House, will also promote economic distortions and inequities. The House proposed feed-stock taxes are enormous, and I project that it will cost my company $50 million, and the mining industry over $1 billion. Our industry is in the longest, deepest recession in our history. We are already burdened with competitive and regulatory pressures, and we feel that there is no guarantee, due to the market pressures, that we can recover these enormous feed-stock taxes. We also feel that these expanded feed-stock taxes will impact capital formation, they will impact market shares, they will impact jobs, and even impact the economic viability of some of our businesses. For this reason, we support a surtax approach because the Superfund funding mechanism should be fair, it should be reasonable, and it should be equitable. The low rate broad-based surtax accomplishes this. It significantly broadens the tax base. It avoids market distortions and inequities. It is based on the ability to pay. It eliminates a number of the discussions and arguments that we have as to who should and who should not be included in the feed-stock tax. And it is easy to administer. We have attached to my written testimony some examples of how the surtax might raise funds. Thank you for the opportunity to speak to you today.

Senator **Symms**. Thank you very much, Mr. Fitzgerald, and your entire statement will be part of the record, as will all of your statements.

Mr. **Fitzgerald**. Thank you.

Senator **Symms**. Mr. Appleby, are you here for the Hercules Corp.?

Mr. **Appleby**. Yes, sir.

[Mr. Fitzgerald's prepared written statement follows:]

TESTIMONY OF JAMES L. FITZGERALD
VICE PRESIDENT - TAXES
ST. JOE MINERALS CORPORATION
before the
SENATE COMMITTEE ON FINANCE
regarding
SUPERFUND - S. 2892

* *

A FUNDING MECHANISM ALTERNATIVE:
SUPERFUND CORPORATE SURTAX

SUMMARY OF STATEMENT

St. Joe Minerals Corporation supports the goal of cleaning up the abandoned hazardous waste sites to an environmentally safe level and supports generally the Superfund concept as a mechanism to achieve that end. But we strongly urge the Congress and this Committee to replace the current feedstock tax approach to financing Superfund -- an approach that, if expanded, can cause serious economic distortions and damage in the markets of the feedstocks being taxed. We recommend that Congress and this Committee instead adopt a more equitable, broad-based and simplified approach -- the imposition of a small corporate surtax on Federal corporate income taxes paid.

The feedstock tax is fundamentally flawed and should be abandoned because:

- It taxes only a small number of companies because they produce certain chemicals and metals, even though virtually all industries have benefited from the production of these substances.
- It will create economic distortions by decreasing the economic viability of companies producing taxable substances, reducing capital formation in the taxed industries, jeopardizing domestic production of strategic materials, potentially forcing the closure of marginal operations, artificially encouraging product substitution and discouraging U.S. investment in the taxed industries.
- It ignores the fact that not all producers of the taxable substances will be able to pass on these costs to consumers. This is particularly true in the case of taxable metals.
- It places U.S. fabricated goods manufacturers consuming Superfund taxed commodities at a competitive disadvantage to imported fabricated goods which are not taxed.

- It creates a highly technical and complex product-specific mire of decision-making that diverts Congress' attention from the substantive policy objectives of the Superfund program.

Congress should replace the feedstock tax approach and adopt a surtax on Federal corporate income taxes paid, because:

- It avoids distortions in industries already heavily burdened with competitive and regulatory pressures;
- It avoids the inequities of singling out a limited number of companies in certain industries to financially respond for abandoned waste sites for which they bear no responsibility;
- It bears a relationship to the ability to pay and avoids taxing companies at a time when they can ill-afford to pay;
- It simplifies Treasury administration and collection by reducing Superfund revenue raising to a simple calculation based on corporate income taxes due;
- It provides a more stable revenue base -- the same one on which the Federal budget is based -- thus ensuring adequate financing of the Fund.

St. Joe believes a Superfund surtax should be levied on all corporations paying Federal corporate income taxes, and has attached to our testimony an analysis of this option as well as several variations for your consideration. The major advantage of the surtax approach is that it imposes only a small additional tax burden on the corporate sector and provides greater equity and cost sharing for cleaning up abandoned hazardous waste sites where a responsible party cannot be located or identified.

Mr. Chairman and Members of the Senate Finance Committee:

I am James L. Fitzgerald, Vice President - Taxes, St. Joe Minerals Corporation. St. Joe is a diversified natural resources company and was acquired by Fluor Corporation in 1981. St. Joe is the largest U.S. integrated producer of lead and zinc and is a major coal and iron ore producer. In addition, St. Joe has significant lead, zinc and gold operations in Latin America.

In 1980, Congress created a major five-year Federal program to clean up the worst abandoned waste sites in the country by enacting the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) (P.L. 96-510). The Hazardous Substance Response Trust Fund ("Superfund") was established by CERCLA as a trust fund in the Treasury of the United States to serve as the repository for monies appropriated by Congress under CERCLA to fund the cleanup program. In addition, CERCLA provides that the funding for this program (a combination of excise taxes on petroleum and specified chemicals and general revenues) be terminated on September 30, 1985.

St. Joe, as a responsible member of the mining industry, supports the goal of cleaning up abandoned hazardous waste sites to a level that is safe for the public health and supports generally the Superfund concept as a mechanism to achieve that end. We are, however, very concerned over the manner in which revenues for Superfund are raised and specifically over the recent actions by the House of Representatives in H.R. 5640, The Superfund Expansion and Protection Act of 1984. H.R. 5640 is the counterpart to Senate Bill 2892, the "Superfund Amendments of 1984", now pending before this Committee.

H.R. 5640 not only continues the excise tax on specified chemicals (feedstock tax) approach but substantially expands it as the mechanism to fund Superfund. The feedstock tax approach can result in significant economic distortions in the affected industries.

For example, the House proposed 10.2 billion fund, which we note EPA Administrator William Ruckelshaus believes is more money than his agency can handle efficiently, will be raised in part by taxes up to $35 per ton on zinc oxide, $33 per ton on zinc and $22 per ton on lead. America's lead and zinc industry, which has not significantly contributed to any serious public health problem from abandoned or inactive sites, already is heavily burdened with competitive and regulatory pressures. We feel any feedstock tax on our industry and particularly these enormous House proposed feedstock taxes would further widen the gap between the costs of foreign and domestic mining.

Senate Bill 2892 presently contains no funding provisions for Superfund and we urge the Committee to consider a low-rate broad-based corporate surtax, rather than the feedstock tax, as the funding mechanism for Superfund. We feel this approach is a more fair, efficient and sensible manner in which to raise money for Superfund.

This Committee is also aware that present funding for Superfund is not due to expire until September 30, 1985. Unfortunately, the House of Representatives acting in haste passed H.R. 5640. We respectfully urge that the Senate, and particularly this Committee, act in a more deliberate and thorough fashion. Specifically, we note that several key studies requested by this Committee concerning the current Superfund Legislation are not yet completed. These studies are expected to be furnished in sufficient time for reauthorization before the September 30, 1985 expiration date. The Superfund legislation presents many complex problems, among them the size of the fund and the funding mechanism, and all the facts need to be in before judgement is made on reauthorization.

WHAT'S WRONG WITH THE FEEDSTOCK TAX

To continue, as well as to expand, the taxing of various products is fundamentally flawed:

- The feedstock tax approach purports to establish a connection between those substances taxed and the substances causing problems at Superfund cleanup sites -- the "polluter pays" principle. While the "polluter pays" principle may be appropriate in connection with programs to provide cleaner air and water, it has no relevance at Superfund sites consisting in whole or in part of wastes generated by businesses that no longer exist or cannot be identified. We believe that imposing a tax on existing manufacturers of chemicals and metals to pay the cleanup costs at sites where the responsible parties cannot be identified is a perverse application of the doctrine of strict liability — that is, the manufacturer of a particular substance is made liable for the disposal practices of others in a previous era. This approach also ignores the fact that all existing manufacturers which are identified with particular waste sites will be liable to pay for the cleanup of those sites. Therefore, the burden of raising funds to clean up truly orphaned sites should be spread more broadly throughout the industrial community.
- The feedstock tax is inequitable -- some substances get taxed, others do not, even though virtually all businesses have used and benefited from the production of these substances.
- A feedstock tax cannot avoid creating economic distortions in the marketplace. It increases the cost of the taxed product and, thus, gives an advantage to those competing products which are not taxed. For example, under the House bill, zinc -- an essential trace metal — is taxed, while aluminum -- equally non-toxic — is not taxed. The two metals compete for certain industrial uses such as die-casting, and the House bill could artifically create an economic incentive to substitute aluminum for zinc.

- U.S. fabricated goods manufacturers incorporating Superfund-taxed substances in their products would be at a competitive disadvantage to identical imported fabricated goods which are not taxed. This result could be avoided by imposing a tax on imported fabricated goods containing a taxable substance, and we strongly recommend doing so if this Committee retains a feedstock funding mechanism. Again, this is an example of the complexities inherent in relying on feedstock taxes which is avoided under our surtax proposal.

For the domestic mining industry, which has yet to recover from one of the deepest and longest recessions in its history, there is no guarantee that feedstock taxes can be passed on to our customers. When the market is weak, there will be intense pressure on U.S. producers to absorb the tax which will further exacerbate the problem of already declining profitability when the market is depressed. The inability of the minerals industry to pass along the feedstock tax to its customers will have the following additional effects:

- Decrease the economic viability of companies engaged in metals and mining and lessen the capital available for modernization, improvements and expansion.
- Shift the thrust of exploration activities and mineral development offshore, causing increased U.S. import dependence on metals and strategic materials, reduced domestic mineral industry employment and greater trade deficits.
- Cause certain marginal operations to become permanently unprofitable, forcing closures and loss of jobs.
- Inhibit domestic investment in new manufacturing operations which utilize taxable raw materials and favor foreign investments.

In sum, we think that the use of a feedstock tax to finance the Superfund is fraught with inequities and threatens the economic viability of many basic domestic industries and particularly the domestic minerals industry.

PROPOSED FINANCING ALTERNATIVE -- TAX ON CORPORATE INCOME TAXES PAID

We believe it is time for Congress to abandon the feedstock tax as a means of financing Superfund. We also believe that the so-called "waste-end" tax is equally undesirable, because it is complex, costly to administer, encourages midnight dumping and gives a significant cost advantage to foreign producers, whose wastes under any scenario would not be taxed.

We strongly urge this Committee to consider a broader-based approach that would more equitably distribute Superfund costs throughout the industrial sector, eliminate the inherently punitive nature of feedstock taxes, avoid economic distortions in the marketplace and bear a relationship to a company's ability to pay.

Specifically, we strongly recommend that this Committee consider an alternative approach to taxation, one in which business and industry as a whole would pay a small tax based on Federal corporate income taxes paid. Such an approach recognizes that businesses and industries of all kinds have benefited from industrial development which has created the problems which Superfund is intended to remedy.

Superfund sites are in no way limited to smokestack industry plant sites. They also include public waste management facilities and the "high tech" industry wastes, such as those in "Silicon Valley". Virtually every business or industrial organization creates and disposes of wastes in some way — either on site, in small quantities destined for handling by commercial or public refuse collection services, or in large quantities destined for disposal in waste management facilities. The Senate has acted recently in passing Senate Bill 757 - the Resource Conservation and Recovery Act (RCRA) reauthorization bill - which provides more stringent protections in the management of hazardous wastes, including those associated with so-called small generators. Waste generation and disposal is, therefore, pervasive in American business. Our proposal recognizes this fact and provides a mechanism for the business community to share in an equitable manner in "footing the bill" to pay for the cleanup of wastes at sites which cannot be attributed to particular parties.

Under the surtax approach, the Superfund tax could be shared by the over 2.8 million businesses which file corporate income tax returns and pay Federal corporate income taxes.

Such a broad-based approach:

- provides a more predictable tax base than the feedstock tax approach - the same one upon which the Federal budget is based - thus, guaranteeing adequate financing of the Fund;
- avoids economic distortions in individual industry markets and the creation of artificial incentives to substitute untaxed substances for taxed substances in manufactured goods;
- avoids the complexities involved in fairly assessing imported products that themselves are taxable chemicals or which contain taxable chemicals;
- ensures that struggling companies will not be made worse off in years when they are unable to pay - that is, when they incur losses and do not have to pay Federal corporate income taxes;
- simplifies Treasury administration of the Superfund tax and avoids, or at least minimizes, the need for more resources in the Internal Revenue Service and

Customs to collect the tax. The TAX DUE line on IRS Form 1120 - "U.S. Corporate Income Tax Return" - provides the sole basis for determining and calculating Superfund surtax liability.

CRITICISMS OF THE SURTAX

In the course of our discussions with others in industry and business, as well as Senate and Executive branch staff, several concerns or objections to the surtax concept have been raised:

- Criticism #1: Many industrial and business sectors are not polluters and, therefore, should not pay a Superfund tax. We believe, as stated earlier, that all businesses have benefited from lower-cost products and materials as a result of the less costly waste management practices of the past. Moreover, virtually all companies use, sell or dispose of potentially hazardous products in some way and to varying degrees. The orphaned site cleanup problem cannot be equitably and accurately attributed to a small or narrow industrial grouping. It is a problem whose solution must be financed over a broader base. Consequently, business in America should join collectively in financing a Fund to pay for those orphaned site cleanup costs that cannot be attributed to particular parties.
- Criticism #2: Small business will be injured by yet another tax. We don't believe this is the case. Even the smallest business, if the Superfund surtax rate is set at one percent, would pay only $1 per $100 of Federal corporate income tax liability. A small business paying $10,000 in taxes would pay a Superfund tax of only $100. Moreover, by definition, any business would pay only when it has the ability to pay, that is, when it is profitable and incurs a Federal income tax liability.

- Criticism #3: The existing feedstock tax is easy to administer because only a handful of companies pay. This criticism indicts itself, because the Superfund site problem is, clearly, the product of more than these few companies. As to its administration, the IRS has yet to promulgate regulations governing assessment of the tax on some substances, and the problem will become even worse if more substances are taxed.
- Criticism #4: It is too late to change the method of tax. We believe that this is the time to switch to a simplified broad-based approach in order to avoid the impacts of more costly and complex chemical-based feedstock and waste-end taxes.
- Criticism #5: A waste-end tax creates an incentive to reduce waste generation. We believe a waste-end tax will encourage more illegal dumping or concealment and will be costly to administer. Moreover, the RCRA statute, as well as the Clean Air and Clean Water Acts, provide an adequate and more appropriate basis by which to create incentives to reduce the current discharge of wastes into the environment. Finally, we do not believe it is an appropriate use of the Government's taxing authority to attempt to tax a problem out of existence, nor do we believe such an approach can be successful.

CONCLUSION

A Superfund surtax will equitably and effectively meet the financing needs of the Superfund — without the complexity and economic repercussions associated with an expansion of the current feedstock tax approach. While we believe the broadest possible base for the imposition of the proposed Superfund surtax is most desirable, we have developed a number of alternative options which would exclude certain categories of corporate taxpayers. These are illustrated in the attached materials. The options presented use a surtax rate that generates the funding level proposed in H.R. 5640. We do not mean, however, by these illustrations to endorse the House's proposed funding level. An appropriate and efficient fund size is one of the many issues that requires a more deliberate and thorough analysis by Congress before reauthorization of Superfund should occur.

In conclusion, we urge this Committee to seriously consider the surtax approach toward ensuring a solvent Superfund financed in an equitable and broad-based manner.

SUPERFUND SURTAX PROPOSAL

PREMISE: Tax corporations in a manner and at a rate that avoids economic dislocations.

PROPOSAL: Impose a surtax on Federal corporate income taxes due (IRS Form 1120, line 33).

WHO PAYS: Only those corporations (see options below) actually paying Federal income taxes in a given tax year.

ESTIMATED CORPORATE TAX RECEIPTS ($ in billions)

	1985	1986	1987	1988	1989	1990*	1985-1990
A. Total Corporate Income Tax Receipts (OMB)	74.3	87.4	101.7	110.4	116.5	120.0	610.3
B. Returns of $10+ M Business Receipts (81% of total)	60.2	70.8	82.4	89.4	94.4	97.2	494.4
C. Returns of $50+ M Business Receipts (66% of total)	49.0	57.7	67.1	72.9	76.9	79.2	402.8

*OMB estimates not available. Assumes 3% increase over 1989.

SURTAX OPTIONS. Five options are proposed, using example surtax rates that would provide a $10+ billion funding level for 1985-90 as contained in H.R. 5640. H.R. 5640 proposes $7.677 billion in crude oil and feedstock taxes and $2.374 billion from general appropriations to provide $10.05 billion for 1985-90.

(Receipts estimates and appropriations in millions of dollars.)

Option I: All corporate taxpayers.

	1985	1986	1987	1988	1989	1990	1985-1990
1.25% Surtax	928.8	1,092.5	1,271.3	1,380.0	1,456.3	1,500.0	7,628.9
Approps.**	44.0	421.0	421.0	496.0	496.0	496.0	2,374.0
TOTAL	972.8	1,513.5	1,692.3	1,876.0	1,952.3	1,996.0	10,002.9

Option II: All corporations having gross receipts over $10 million (81% of total taxes paid).

	1985	1986	1987	1988	1989	1990	1985-1990
1.55% Surtax	933.1	1,097.4	1,277.2	1,385.7	1,463.2	1,506.6	7,663.2
Approps.	44.0	421.0	421.0	496.0	496.0	496.0	2,374.0
TOTAL	977.1	1,518.4	1,698.2	1,881.7	1,959.2	2,002.6	10,037.2

Note: A 1.9% surtax applicable only to corporations having gross receipts over $50M would provide $7,653.2 million for 1985-90 (66% of total taxes paid).

Option III: Only "industrial" corporations (agriculture, mining, manufacturing, construction, and transportation and utilities); excluded are wholesale and retail trade, finance, insurance, real estate, and services (67% of total taxes paid).

	1985	1986	1987	1988	1989	1990	1985-1990
1.9% Surtax	946.2	1,113.4	1,293.9	1,406.0	1,482.0	1,527.6	7,769,1
Approps.	44.0	421.0	421.0	496.0	496.0	496.0	2,374.0
TOTAL	990.2	1,534.4	1,714.9	1,902.0	1,978.0	2,023.6	10,143.1

Option IV: Only those "industrial" corporations having gross receipts over $10 million (63% of total taxes paid).

	1985	1986	1987	1988	1989	1990	1985-1990
2.0% Surtax	936.0	1,102.0	1,282.0	1,392.0	1,468.0	1,512.0	7,692.0
Approps.	44.0	421.0	421.0	496.0	496.0	496.0	2,374.0
TOTAL	980.0	1,523.0	1,703.0	1,888.0	1,964.0	2,008.0	10,066.0

Note: A 2.35% surtax applicable to "industrial" corporations having gross receipts in excess of $50M would provide $7,600.1 million for 1985-90 (53% of total taxes paid).

Option V: Existing law feedstock tax PLUS only "industrial" corporations having gross receipts over $10 million.

	1985	1986	1987	1988	1989	1990	1985-1990
1.5% Surtax	702.2	825.9	961.0	1,043.3	1,101.0	1,134.0	5,767.4
Existing tax	330.0	330.0	330.0	330.0	330.0	330.0	1,980.0
Approps.	44.0	421.0	421.0	496.0	496.0	496.0	2,374.0
TOTAL	1,076.2	1,576.9	1,712.0	1,869.3	1,927.0	1,960.0	10,121.4

Note: For "industrial" corporations with over $50 million in gross receipts a 1.75% surtax would provide $5,660.6 million in tax receipts for 1985-90.

**General appropriations contained in current law for 1985 and in H.R. 5640 for 1986-90.

ATTACHMENT 1

Form 1120

Department of the Treasury
Internal Revenue Service

U.S. Corporation Income Tax Return

For calendar year 1983 or other tax year beginning ...., 1983, ending ...., 19.....

▶ For Paperwork Reduction Act Notice, see page 1 of the instructions.

OMB No. 1545-0123

1983

Check if a—
A Consolidated return ☐
B Personal Holding Co. ☐
C Business Code No. (See page 9 of instructions)

Use IRS label. Other-wise please print or type.

Name
Number and street
City or town, State, and ZIP code

D Employer identification number
E Date incorporated
F Total assets (see Specific Instructions)
$

G Check box if there has been a change in address from the previous year ▶

ARCO → 1 (a) Gross receipts or sales $..............(b) Less returns and allowances $.............. Balance ▶ 1(c)

Gross Income

2 Cost of goods sold (Schedule A) and/or operations (attach schedule) 2
3 Gross profit (subtract line 2 from line 1(c)) 3
4 Dividends (Schedule C) 4
5 Interest 5
6 Gross rents 6
7 Gross royalties 7
8 Capital gain net income (attach separate Schedule D) 8
9 Net gain or (loss) from Form 4797, line 14(a), Part II (attach Form 4797) 9
10 Other income (see instructions—attach schedule) 10
11 TOTAL income—Add lines 3 through 10 and enter here ▶ 11

Deductions

12 Compensation of officers (Schedule E) 12
13 (a) Salaries and wages $..............(b) Less jobs credit $.............. Balance ▶ 13(c)
14 Repairs (see instructions) 14
15 Bad debts (Schedule F if reserve method is used) 15
16 Rents 16
17 Taxes 17
18 Interest 18
19 Contributions (not over 10% of line 30 adjusted per instructions) 19
20 Depreciation (attach Form 4562) 20
21 Less depreciation claimed in Schedule A and elsewhere on return 21(a) ( ) 21(b)
22 Depletion 22
23 Advertising 23
24 Pension, profit-sharing, etc. plans (see instructions) 24
25 Employee benefit programs (see instructions) 25
26 Other deductions (attach schedule) 26
27 TOTAL deductions—Add lines 12 through 26 and enter here ▶ 27
28 Taxable income before net operating loss deduction and special deductions (subtract line 27 from line 11) 28
29 Less: (a) Net operating loss deduction (see instructions—attach schedule) 29(a)
(b) Special deductions (Schedule C) 29(b) 29
30 Taxable income (subtract line 29 from line 28) 30

Tax

31 TOTAL TAX (Schedule J) 31
32 Credits: (a) Overpayment from 1982 allowed as a credit
(b) 1983 estimated tax payments
(c) Less refund of 1983 estimated tax applied for on Form 4466 ( )
(d) Tax deposited with Form 7004
(e) Credit from regulated investment companies (attach Form 2439)
(f) Federal tax on special fuels and oils (attach Form 4136) 32

3

[illegible] → 33 TAX DUE (subtract line 32 from line 31—if line 32 is greater than line 31, skip line 33 and go to line 34). See instruction C3 for depositary method of payment
(Check ▶ ☐ if Form 2220 is attached. See instruction D.) ▶ $.............. 33
34 OVERPAYMENT (subtract line 31 from line 32) 34
35 Enter amount of line 34 you want: Credited to 1984 estimated tax ▶ Refunded ▶ 35

Please Sign Here

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which preparer has any knowledge.

▶ Signature of officer Date ▶ Title

Paid Preparer's Use Only

Preparer's signature ▶ Date Check if self-employed ▶ ☐ Preparer's social security number

Firm's name (or yours, if self-employed) and address ▶ E.I. No. ▶ ZIP code ▶

Exhibit 3

ATTACHMENT 2

DETAILS OF SURTAX OPTION 1

Explanation: All corporate taxpayers would be assessed a surtax on income taxes due.

Assumptions: The corporate contribution to the Superfund should be about $7.7 billion over the 1985-90 period to conform to the House-passed bill.

Amounts shown for Federal appropriations parallel those provided in the House-passed bill.

TAX BASE
(millions of dollars)

	1985	1986	1987	1988	1989	1990	1985-90
TOTAL TAX RECEIPTS (OMB)	74,300	87,400	101,700	110,400	116,500	120,000*	610,300

SUPERFUND RECEIPTS

	1985	1986	1987	1988	1989	1990	1985-90
1.25% Surtax	928.8	1,092.5	1,271.3	1,380.0	1,456.3	1,500.0	7,628.9
Appropriations	44.0	421.0	421.0	496.0	496.0	496.0	2,374.0
TOTAL	972.8	1,513.5	1,692.3	1,876.0	1,952.3	1,996.0	10,002.9

NOTE: If corporate contribution to Superfund reduced to $5 billion total, surtax would be 0.8%.

* OMB estimates not available. Assumes 3% increase over 1989.

Source: Mid-Session Review of the 1985 Budget, Office of Management and Budget, April 15, 1984.

ATTACHMENT 3

DETAILS OF SURTAX OPTION 2

Explanation: Only corporate taxpayers having gross receipts over $10 million would pay a surtax.

Assumptions: Assumptions concerning total corporate Superfund contribution and Federal appropriations the same as in Option 1.

Based on 1981 IRS data, corporations with gross receipts over $10 million account for 81% of total corporate income taxes paid (see Attachment 2). This percentage is assumed to be the same in the 1985-90 period.

TAX BASE
(millions of dollars)

	1985	1986	1987	1988	1989	1990	1985-90
TOTAL TAX RECEIPTS (OMB)	74,300	87,400	101,700	110,400	116,500	120,000*	610,300
TAXES PAID BY $10M+ COMPANIES (81% of Total)	60,200	70,800	82,400	89,400	94,400	97,200	494,400

SUPERFUND RECEIPTS

	1985	1986	1987	1988	1989	1990	1985-90
1.55% SURTAX	933.1	1,097.4	1,277.2	1,385.7	1,463.2	1,506.6	7,663.2
Appropriations	44.0	421.0	421.0	496.0	496.0	496.0	2,374.0
TOTAL	977.1	1,518.4	1,698.2	1,881.7	1,959.2	2,002.6	10,037.2

NOTE: If corporate contribution to Superfund reduced to $5 billion total, surtax would be 1%.

*OMB estimates not available. Assumes 3% increase over 1989.

Sources: Mid-Session Review of the 1985 Budget, Office of Management and Budget, April 15, 1984.

1981 Statistics of Income - Corporation Income Tax Returns, Table 7, Internal Revenue Service, Publication 16 (Rev. 7-84).

ATTACHMENT 4

DETAILS OF SURTAX OPTION 3

Explanation: Only corporate taxpayers in "industrial" sectors (agriculture, mining manufacturing, construction and transportations and utilities) would pay a surtax. Exempted are the following sectors: wholesale and retail trade, finance, insurance, real estate and services.

Assumptions: Assumptions concerning total corporate Superfund contribution and Federal appropriations the same as in Option 1.

Based on 1981 IRS data, corporations in the "industrial" sectors account for 67% of total corporate income taxes paid (see Attachment 2). This percentage is assumed to be the same in the 1985-90 period.

TAX BASE
(millions of dollars)

	1985	1986	1987	1988	1989	1990	1985-90
TOTAL TAX RECEIPTS (OMB)	74,300	87,400	101,700	110,400	116,500	120,000*	610,300
TAXES PAID BY "INDUSTRIALS" (67% of Total)	49,800	58,600	68,100	74,000	78,000	80,400	408,900

SUPERFUND RECEIPTS

	1985	1986	1987	1988	1989	1990	1985-90
1.9% SURTAX	946.2	1,113.4	1,293.9	1,406.0	1,482.0	1,527.6	7,769.1
Appropriations	44.0	421.0	421.0	496.0	496.0	496.0	2,374.0
TOTAL	990.2	1,534.4	1,714.9	1,902.0	1,978.0	2,023.6	10,143.1

NOTE: If corporate contribution to Superfund reduced to $5 billion total, surtax would be 1.2%.

*OMB estimates not available. Assumes 3% increase over 1989.

Sources: Mid-Session Review of the 1985 Budget, Office of Management and Budget, April 15, 1984.

1981 Statistics of Income - Corporation Income Tax Returns, Table 1, Internal Revenue Service, Publication 16 (Rev. 7-84).

ATTACHMENT 5

DETAILS OF SURTAX OPTION 4

Explanation: Only corporate taxpayers in "industrial" sectors and having gross receipts over $10 million would pay a surtax. See Option 3 for description of "industrial" corporations.

Assumptions: Assumptions concerning total corporate Superfund contribution and Federal appropriations the same as in Option 1.

Based on 1981 IRS data, corporations in the "industrial" sectors with gross receipts over $10 million account for 63% of total corporate income taxes (see Attachment 2). This percentage is assumed to be the same in the 1985-90 period.

TAX BASE
(millions of dollars)

	1985	1986	1987	1988	1989	1990	1985-90
TOTAL TAX RECEIPTS (OMB)	74,300	87,400	101,700	110,400	116,500	120,000*	610,300
TAXES PAID BY $10M+ "INDUSTRIALS" (63% of Total)	46,800	55,100	64,100	69,600	73,400	75,600	384,600

SUPERFUND RECEIPTS

2% SURTAX	936.0	1,102.0	1,282.0	1,392.0	1,468.0	1,512.0	7,692.0
Appropriations	44.0	421.0	421.0	496.0	496.0	496.0	2,374.0
TOTAL	980.0	1,523.0	1,703.0	1,888.0	1,964.0	2,008.0	10,066.0

NOTE: If corporate contribution to Superfund reduced to $5 billion total, surtax would be 1.3%.

VARIATION: If instead of a cutoff of over $10 million in gross receipts a cutoff of over $50 million is used (53% of total corporate income taxes), the surtax would be 2.4%.

Again, if corporate contribution to Superfund reduced to $5 billion total, surtax would be 1.55%.

*OMB estimates not available. Assumes 3% increase over 1989.

Sources: Mid-Session Review of the 1985 Budget, Office of Management and Budget, April 15, 1984.

1981 Statistics of Income - Corporation Income Tax Returns, Table 7, Internal Revenue Service, Publication 16 (Rev. 7-84).

ATTACHMENT 6

DETAILS OF SURTAX OPTION 5

Explanation: Retain current law feedstock taxes and impose a surtax only on corporate taxpayers in "industrial" sectors having gross receipts over $10 million. See option 3 for description of "industrial" corporations.

Assumptions: Assumptions concerning total corporate Superfund contribution and Federal appropriations the same as in Option 1.

Based on 1981 IRS data, corporations in the "industrial" sectors with gross receipts over $10 million account for 63% of total corporate income taxes (see Attachment 2). This percentage is assumed to be the same in in the 1985-90 period.

TAX BASE
(millions of dollars)

	1985	1986	1987	1988	1989	1990	1985-90
TOTAL TAX RECEIPTS (OMB)	74,300	87,400	101,700	110,400	116,500	120,000*	610,300
TAXES PAID BY $10M+ "INDUSTRIALS" (63% of Total)	46,800	55,100	64,100	69,600	73,400	75,600	384,600

SUPERFUND RECEIPTS

	1985	1986	1987	1988	1989	1990	1985-90
1.5% SURTAX	702.2	825.9	961.0	1,043.3	1,101.0	1,134.0	5,767.4
FEEDSTOCK	330.0	330.0	330.0	330.0	330.0	330.0	1,980.0
Appropriations	44.0	421.0	421.0	496.0	496.0	496.0	2,374.0
TOTAL	1,076.2	1,576.9	1,712.0	1,869.3	1,927.0	1,960.0	10,121.4

NOTE: If corporate surtax contribution to Superfund reduced to $3 billion total, surtax would be 0.8%.

VARIATION: If instead of a cutoff of over $10 million in gross receipts a cutoff of over $50 million is used (53% of total corporate income taxes), the surtax would be 1.8%.

Again, if corporate surtax contribution to Superfund reduced to $3 billion total, surtax would be 0.9%.

*OMB estimates not available. Assumes 3% increase over 1989.

Sources: Mid-Session Review of the 1985 Budget, Office of Management and Budget, April 15, 1984.

1981 Statistics of Income - Corporation Income Tax Returns, Table 7, Internal Revenue Service, Publication 16,(Rev. 7-84).

SUPERFUND TAX ON MINERALS INDUSTRY:

CURRENT LAW COMPARED TO H.R. 5640

(Based on 1983 data in short tons)

Current Law (Annual Rate) - $4,305,806

H.R. 5640	With Waste-End Tax	Without Waste-End Tax
1985	$109,261,835	$109,261,835
1986	136,405,024	136,405,024
1987	141,324,767	172,231,514
1988	156,105,794	182,127,413
1989	156,105,794	191,454,824
1990	156,105,794	191,454,824
TOTAL[1]	$855,309,008	$982,935,494

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[1] Not adjusted for rate of inflation as required by H.R. 5640 (i.e. percent of producer price increase). Consequently, the total tax is substantially understated.

SUPERFUND TAX ON MINERALS INDUSTRY - CURRENT LAW COMPARED TO H.R. 5640
(1983 data in short tons)

SUBSTANCE	CURRENT LAW TAX RATE/TON	1985 H.R. 5640 TAX RATE/TON	1983 AVG. PRICE/TON	U.S. PROD.	U.S. IMP.	TOTAL TAXABLE QUANTITY	CURRENT LAW REVENUE	1985 H.R. 5640 REVENUE
Antimony	$4.45	$30.00	$1,800	27,000	11,000	38,000	$ 169,100	$1,140,000
Arsenic	4.45	30.00	4,200	Unknown	187	187	800	5,610
Arsenic Trioxide	3.41	12.97	780	Unknown	12,125	12,125	41,300	157,261
Bromine	4.45	9.73	625	190,000	2,500	192,500	856,600	1,873,025
Cadmium	4.45	30.00	2,200	1,103	2,425	3,527	15,700	105,810
Chromium	4.45	30.00	7,500	0	210,300	254,800	934,500	7,644,000
Chromate	1.52	1.52	74	0	210,000	210,000	319,200	319,200
Cobalt	4.45	30.00	25,000	350	9,000	9,350	41,600	280,500
Cupric Sulfate	1.87	23.18	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cupric Oxide	3.59	30.00	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cuprous Oxide	3.97	30.00	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Lead Oxide	4.14	No tax	Unknown	185,224	13,636	198,860	823,280	No tax
Mercury	4.45	30.00	8,700	1,482	342	1,824	8,100	54,720
Nickel	4.45	30.00	6,400	88,700	144,000	232,700	1,035,515	6,981,000
Zinc Chloride	2.22	10.55	Unknown	8,775	487	9,262	20,562	97,714
Zinc Oxide	No tax	14.43	788	129,596	31,588	161,184	0	2,325,885
Zinc Sulfate	1.90	8.30	Unknown	10,369	584	20,815	39,549	172,764
Aluminum Sulfate	No tax	3.52	Unknown	Unknown	Unknown	Unknown	0	Unknown
Aluminum Phosphide	No tax	30.00	Unknown	Unknown	Unknown	Unknown	0	Unknown
Asbestos	No tax	5.76	403	77,162	220,462	297,624	0	1,714,314
Barium Sulfide	2.13	7.13	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Lead	No tax	8.27	440	1,146,402	148,812	1,295,214	0	10,711,423
Copper	No tax	23.60	1,580	1,600,000	550,000	2,150,000	0	50,740,000
Lithium Carbonate	No tax	30.00	2,960	30,000[1]	100	30,100	0	903,000
Manganese	No tax	22.69	64	0	485,000	485,000	0	11,004,650
Selenium	No tax	30.00	7,600	386	331	717	0	21,510
Uranium Oxide	No tax	30.00	Unknown	13,500	Unknown	13,500	0	405,000
Vanadium	No tax	30.00	7,000	3,401	1,750	5,151	0	154,530
Zinc	No tax	12.48	840	325,181	672,409	997,590	0	12,449,923
TOTALS							$4,305,806	$109,261,835

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[1] 1984 production estimate

SUPERFUND TAX ON MINERALS INDUSTRY - CURRENT LAW COMPARED TO H.R. 5640
(1986 - 1990 PROJECTIONS)

	1986 Rate	1986 Revenue	1987 Rate	1987 Revenue	1987 W/O Waste End Rate	1987 W/O Waste End Revenue	1988 Rate	1988 Revenue	1988 W/O Waste End Rate	1988 W/O Waste End Revenue
Antimony	30.00	1,140,000.00	30.00	1,140,000.00	35.00	1,330,000.00	30.00	1,140,000.00	35.00	1,330,000.00
Antimony Dioxide	30.00	unknown	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Arsenic	30.00	5,610.00	30.00	5,610.00	35.00	6,545.00	30.00	5,610.00	35.00	6,545.00
Arsenic Trioxide	17.29	209,641.00	19.46	235,953.00	25.94	314,523.00	25.94	314,523.00	30.26	366,903.00
Bromine	12.97	2,496,725.00	14.59	2,808,575.00	19.46	3,746,050.00	19.46	3,746,050.00	22.70	4,369,750.00
Cadmium	30.00	105,810.00	30.00	105,810.00	35.00	123,445.00	30.00	105,810.00	35.00	123,445.00
Chromium	30.00	7,644,000.00	30.00	7,644,000.00	35.00	8,918,000.00	30.00	7,644,000.00	35.00	8,918,000.00
Chromite	1.52	319,200.00	1.52	319,200.00	1.70	357,000.00	1.70	357,000.00	1.98	415,800.00
Cobalt	30.00	280,500.00	30.00	280,500.00	35.00	327,250.00	30.00	280,500.00	35.00	327,250.00
Cupric Sulfate	30.00	unknown	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Cupric Oxide	30.00	unknown	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Cuprous Oxide	30.00	unknown	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Lead Oxide										
Mercury	30.00	54,720.00	30.00	54,720.00	35.00	63,840.00	30.00	54,720.00	35.00	63,840.00
Nickel	30.00	6,981,000.00	30.00	6,981,000.00	35.00	8,144,500.00	30.00	6,981,000.00	35.00	8,144,500.00
Zinc Chloride	14.07	130,316.00	15.63	146,617.00	21.10	195,428.00	21.10	195,428.00	24.62	228,030.00
Zinc Oxide	19.24	3,101,180.00	21.65	3,489,634.00	28.86	4,651,770.00	28.86	4,651,770.00	33.67	5,427,065.00
Zinc Sulfate	11.07	230,422.00	12.45	259,146.00	16.60	345,529.00	16.60	345,529.00	19.37	403,187.00
Aluminum Sulfate	4.69	unknown	5.28	unknown	7.04	unknown	7.04	unknown	8.40	unknown
Aluminum Phosphate	30.00	unknown	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Asbestos	7.68	2,285,752.00	8.64	2,571,471.00	11.52	3,428,628.00	11.52	3,428,628.00	13.44	400,067.00
Barium Sulfide	9.51	unknown	10.70	unknown	14.26	unknown	14.26	unknown	16.64	unknown
Lead	11.03	14,286,210.00	12.41	16,073,606.00	16.54	21,422,840.00	16.54	21,422,840.00	19.30	24,997,630.00
Copper	30.00	64,500,000.00	30.00	64,500,000.00	35.00	75,250,000.00	30.00	64,500,000.00	35.00	75,250,000.00
Lithium Carbonate	30.00	903,000.00	30.00	903,000.00	35.00	1,053,500.00	30.00	903,000.00	35.00	1,053,500.00
Manganese	30.00	14,550,000.00	30.00	14,550,000.00	35.00	16,975,000.00	30.00	14,550,000.00	35.00	16,975,000.00
Selenium	30.00	21,510.00	30.00	21,510.00	35.00	25,095.00	30.00	21,510.00	35.00	25,095.00
Uranium Oxide	30.00	405,000.00	30.00	405,000.00	35.00	472,500.00	30.00	405,000.00	35.00	472,500.00
Vanadium	30.00	154,530.00	30.00	154,530.00	35.00	180,285.00	30.00	154,530.00	35.00	180,285.00
Zinc	16.64	16,599,898.00	18.72	18,674,885.00	24.96	24,899,846.00	24.96	24,898,846.00	29.12	29,049,821.00
TOTAL		$136,405,024.00		$141,324,767.00		$172,231,574.00		$156,105,794.00		$182,127,413.00

SUPERFUND TAX ON MINERALS INDUSTRY - CURRENT LAW COMPARED TO H.R. 5640
(1986 - 1990 PROJECTIONS)
(Continued)

	1989 Rate	1989 Revenue	1989 W/O Waste End Rate	1989 W/O Waste End Revenue	1990 Rate	1990 Revenue	1990 W/O Waste End Rate	1990 W/O Waste End Revenue
Antimony	30.00	1,140,000.00	35.00	1,330,000.00	30.00	1,140,000.00	35.00	1,330,000.00
Antimony Dioxide	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Arsenic	30.00	5,610.00	35.00	6,545.00	30.00	5,610.00	35.00	6,545.00
Arsenic Trioxide	25.94	314,523.00	34.59	419,404.00	25.94	314,523.00	34.59	419,404.00
Bromine	19.46	3,746,050.00	25.95	4,995,375.00	19.46	3,746,050.00	25.95	4,995,375.00
Cadmium	30.00	105,810.00	35.00	123,445.00	30.00	105,810.00	35.00	123,445.00
Chromium	30.00	7,644,000.00	35.00	8,918,000.00	30.00	7,644,000.00	35.00	8,918,000.00
Chromite	1.70	357,000.00	2.27	476,700.00	1.70	357,000.00	2.27	476,700.00
Cobalt	30.00	280,500.00	35.00	327,250.00	30.00	280,500.00	35.00	327,250.00
Cupric Sulfate	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Cupric Oxide	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Cuprous Oxide	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Lead Oxide								
Mercury	30.00	54,720.00	35.00	63,840.00	30.00	54,720.00	35.00	63,840.00
Nickel	30.00	6,981,000.00	35.00	8,144,500.00	30.00	6,981,000.00	35.00	8,144,500.00
Zinc Chloride	21.10	195,428.00	28.13	260,540.00	21.10	195,428.00	28.13	260,540.00
Zinc Oxide	28.86	4,651,770.00	35.00	5,641,440.00	28.86	4,651,770.00	35.00	5,641,440.00
Zinc Sulfate	16.60	345,529.00	22.13	460,636.00	16.60	345,529.00	22.13	460,636.00
Aluminum Sulfate	7.04	unknown	9.35	unknown	7.04	unknown	9.35	unknown
Aluminum Phosphate	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Asbestos	11.52	3,428,628.00	15.36	4,571,505.00	11.52	3,428,628.00	15.36	4,571,505.00
Barium Sulfide	14.26	unknown	19.01	unknown	14.26	unknown	19.01	unknown
Lead	16.54	21,422,840.00	22.05	28,559,469.00	16.54	21,422,840.00	22.05	28,559,469.00
Copper	30.00	64,500,000.00	35.00	75,250,000.00	30.00	64,500,000.00	35.00	75,250,000.00
Lithium Carbonate	30.00	903,000.00	35.00	1,053,500.00	30.00	903,000.00	35.00	1,053,000.00
Manganese	30.00	14,500,000.00	35.00	16,975,000.00	30.00	14,500,000.00	35.00	16,975,000.00
Selenium	30.00	21,510.00	35.00	25,095.00	30.00	21,510.00	35.00	25,095.00
Uranium Oxide	30.00	405,000.00	35.00	472,500.00	30.00	405,000.00	35.00	472,500.00
Vanadium	30.00	154,530.00	35.00	180,285.00	30.00	154,530.00	35.00	180,285.00
Zinc	24.96	24,898,846.00	33.28	33,199,795.00	24.96	24,898,846.00	33.28	33,199,795.00
TOTAL		$156,105,794.00		$191,454,824.00		$156,105,794.00		$191,454,824.00

H.R. 5640

SUPERFUND TAX PROVISION

SEC. [illegible]. INCREASE IN TAX ON CERTAIN CHEMICALS.

(a) INCREASE IN RATE OF TAX; ADDITIONAL CHEMICALS TAXED.—Subsection (b) of section 4661 of the Internal Revenue Code of 1954 (relating to amount of tax imposed on certain chemicals) is amended by striking out the table contained in such subsection and inserting in lieu thereof the following:

In the case of:	The tax (before any inflation adjustment) is the following amount per ton			
	Sales during 1985	Sales during 1986	Sales during 1987	Sales during 1988 and thereafter until the termination date
Organic substances:				
[illegible]	$29.91	$30.00	$30.00	$30.00
[illegible]	6.80	8.00	9.10	12.20
[illegible]	9.75	13.05	14.00	18.50
[illegible]	4.87	5.00	6.30	8.40
[illegible]	5.15	6.87	7.75	10.20
Coal-derived light oils	5.02	6.49	7.53	10.04
Coal tars	1.75	2.37	2.67	3.56
[illegible]	6.80	9.10	10.23	13.70
[illegible]	3.44	3.44	3.44	4.59
[illegible]	6.80	9.15	10.23	13.70
[illegible]	5.87	7.83	8.80	11.74
[illegible]	5.19	6.92	7.78	10.38
[illegible] (before 1990)	10.65	14.06	16.75	22.33
[illegible] (after [illegible])				15.40
Inorganic substances:				
[illegible]	3.52	4.69	5.28	7.04
[illegible]	30.00	30.00	30.00	30.00
[illegible]	2.64	3.52	3.95	5.28
[illegible]	30.00	30.00	30.00	30.00
[illegible]	30.00	30.00	30.00	30.00
[illegible]	30.00	30.00	30.00	30.00
[illegible]	12.97	17.29	19.46	25.94
[illegible]	5.76	7.68	8.64	11.52
[illegible]	7.13	9.51	10.70	14.26
[illegible]	9.73	12.97	14.59	19.46
[illegible]	30.00	30.00	30.00	30.00
[illegible]	[illegible]	4.07	4.57	6.10
[illegible]	[illegible]	1.52	1.52	1.70
[illegible]	30.00	30.00	30.00	30.00
[illegible]	30.00	30.00	30.00	30.00
[illegible]	[illegible]	30.00	30.00	30.00
[illegible]	30.00	30.00	30.00	30.00
[illegible]	[illegible]	30.00	30.00	30.00
[illegible]	30.00	30.00	30.00	30.00
[illegible]	0.95	1.25	1.41	1.88
[illegible]	[illegible]	30.00	30.00	30.00
[illegible]	8.77	11.69	12.41	16.54
[illegible]	30.00	30.00	30.00	30.00
[illegible]	[illegible]	30.00	30.00	30.00
[illegible]	30.00	30.00	30.00	30.00
[illegible]	30.00	30.00	30.00	30.00
[illegible]	[illegible]	4.07	4.57	6.10
[illegible]	7.65	10.20	11.48	15.30
[illegible]	6.65	6.65	6.65	6.65
[illegible]	15.63	20.84	23.44	30.00
[illegible]	9.83	13.11	14.75	19.66
[illegible]	30.00	30.00	30.00	30.00
[illegible]	[illegible]	[illegible]	27.72	30.00
[illegible]	2.82	3.76	4.23	5.64
[illegible]	30.00	30.00	30.00	30.00
[illegible]	30.00	30.00	30.00	30.00
[illegible]	0.78	1.04	1.17	1.56
[illegible]	30.00	30.00	30.00	30.00
[illegible]	30.00	30.00	30.00	30.00
[illegible]	12.48	16.64	18.72	24.96
[illegible]	[illegible]	14.07	15.83	21.10
[illegible]	[illegible]	19.24	21.65	28.86
[illegible]	[illegible]	11.07	12.45	16.60

H.R. 5640

IF NO WASTE-END TAX IS ENACTED

SEC. [illegible]. INCREASE IN TAX IF WASTE-END TAX NOT ENACTED.

(a) INCREASE IN TAX.—

(1) TAX ON PETROLEUM.—Subsections (a) and (b) of section 4611 of the Internal Revenue Code of 1954 (relating to environmental tax on petroleum), as amended by section 502, are each amended by striking out "7.86 cents" and inserting in lieu thereof "[illegible] cents".

(2) TAX ON CERTAIN CHEMICALS.—Subsection (b) of section 4661 of such Code (relating to amount of tax imposed on certain chemicals), as amended by section 503, is amended by striking out the table contained in such subsection and inserting in lieu thereof the following:

In the case of:	[illegible]		
	[illegible]	[illegible]	[illegible]
Organic substances:			
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	13.20	15.40	17.60
[illegible]	[illegible]	[illegible]	26.11
[illegible]	8.40	9.80	11.20
[illegible]	[illegible]	12.02	13.73
[illegible]	[illegible]	11.71	13.38
[illegible]	[illegible]	4.13	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	4.97	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	11.74	13.70	[illegible]
[illegible]	[illegible]	12.11	[illegible]
[illegible]	[illegible]	21.77	[illegible]
Inorganic substances:			
[illegible]	[illegible]	8.40	9.35
[illegible]	35.00	35.00	35.00
[illegible]	[illegible]	6.16	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	19.37	22.13".

STATEMENT OF HOMER P. APPLEBY, VICE PRESIDENT, HIMONT INC., WILMINGTON, DE

Mr. APPLEBY. I am Homer Appleby. I represent Himont Inc. Himont is a joint venture that is 50-percent owned by Hercules, the other partner being Montedison S.p.A. of Milan, Italy. On behalf of Himont and Hercules, I appreciate the opportunity to appear before the committee this morning. We realize that there are hazardous wastesites which for the good of all of our citizens have to be cleaned up, but we also ask that the committee very carefully consider the amount and manner in which the taxes are applied. Under the terms of H.R. 5640, the Superfund tax on Himont on the feed-stock propylene would increase from nearly $3 million today to approximately $12 million a year. Through 1983, we have never earned that much money in after-tax profits from our U.S. operations on the product that is derived from that feedstock, the product being polypropylene. Polypropylene in the form of film and fiber is used to make a vast variety of products.

Senator SYMMS. You have never earned as much as the proposed tax, is that what you are saying?

Mr. APPLEBY. That is correct, sir. We have been in business in the neighborhood of 25 years, and we have never had $12 million in after-tax profits on our U.S. operations in polypropylene. Ironically, polypropylene is not a toxic substance. It is not a hazardous material. When burned, it only emits the same carbon and hydrogen molecules that would have been emitted if burned in its original state. We would like to recommend to the committee that consideration be given to broadening the base of the tax beyond just additional general revenues. One way to accomplish this would be to impose a tiered tax which distinguishes the end use of the feedstocks. For example, there are other products derived from propylene, but polypropylene is one which is indeed nontoxic, noncontaminating, and nonpolluting. We would also advise the committee that there are certain tax rates contained in H.R. 5640 regarding inorganic feedstocks, and I make specific reference to nitric acid, which would severely impact the domestic Hercules plants. I understand that this matter has been discussed with the staffs of several of the Senators by Hercules personnel. Most simply put, we hope that you will draft a bill which will maintain the vitality of a strong American industry but also, at the same time, maintain the thousands of jobs that are at stake with the proposed tax today. Thank you.

Senator SYMMS. Thank you very much, Mr. Appleby. Ms. Caples?

[Mr. Appleby's prepared written statement follows:]

STATEMENT OF H.P. APPLEBY, JR., VICE PRESIDENT, HIMONT INCOPORTATED, BEFORE THE UNITED STATES SENATE COMMITTEE ON FINANCE

Mr. Chairman: On behalf of HIMONT Incoporated, I appreciate the opportunity to appear before the Committee this morning.

We realize that there are toxic sites which for the good of all of our citizens must be cleaned-up.

But we also ask that the Committee carefully consider the amount and manner in which the taxes are applied.

Under the terms of H.R. 5640, our tax on the feedstock propylene would increase from nearly $3 million to $12 million a year. Through 1983 we have never earned that much in after tax profits in the United States on the product derived from that feedstock--polypropylene.

Polypropylene, in the form of film or fiber, is used to make milk cartons and other types of food containers, as well as upholstery and light weight automobile parts.

Polypropylene is a world commodity product, with its price based on supply and not cost. We cannot simply pass the tax on.

Polypropylene is not toxic. When burned it only emits the same carbon and hydrogen molecules that would have been emitted if burned in it original state.

Specifically, we hope the Committee will broaden the base of the tax. Beyond general revenues, one way to accomplish this is to impose a tiered tax which distinguishes the end uses of a feedstock. For example, there are other products derived from propylene, but polypropylene is non-toxic and non-contaminating.

We would also advise the Committee that certain tax rates contained in H.R. 5640 regarding inorganic feedstocks--specifically nitric acid--would severely impact several domestic Hercules plants. I understand this matter has been discussed with the staffs of several Senators by Hercules personnel.

Most simply put, we hope you will craft a bill which will maintain the vitality of a strong American industry, providing thousands of jobs.

September 21, 1984.

STATEMENT BY H.P. APPLEBY, JR., VICE PRESIDENT, HIMONT INCORPORATED, A COMPANY JOINTLY OWNED BY HERCULES INCOPORATED OF THE UNITED STATES AND MONTEDISON, S.p.A., AN ITALIAN CORPORATION, ON THE EXTENTION OF THE COMPREHENSIVE ENVIRONEMNTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980, BEFORE THE U.S. SENATE FINANCE COMMITTEE, SEPTEMBER 21, 1984

MR. CHAIRMAN: We appreciate the opportunity to appear before the Committee this morning and we hope that the testimony that we provide will be of assistance to the Committee during its continuing deliberations on the Superfund bill.

By way of background, HIMONT, with headquarters in Wilmington, Delaware, is a company jointly owned by Hercules Incorporated and Montedison, S.p.A., an Italian chemical corporation. As such, it is one of the world's largest producers of polypropylene.

Polypropylene is a plastic material used in upholstery fabrics, such as Herculon, light weight plastic parts contributing to the fuel efficiency of new automobiles, and throughout our grocery stores where it is molded to contain such items as milk, dairy toppings and pancake syrups.

Polypropylene is made from the feedstock, propylene, which as you know is distilled from crude oil during the refining process.

Under the current Superfund law, our tax for propylene is almost $3 million a year. At that level of tax, our U.S. plants are severely penalized compared to our overseas plants, but remain marginally competitive.

At this point, Mr. Chairman, let me say that HIMONT and Hercules support and understand the need for toxic waste clean-up. But we ask you to carefully consider what impact H.R. 5640, as well as the funding plans this Committee has under consideration, would have on what is still a viable industry, providing thousands of American jobs.

Under the terms of H.R. 5640, our Superfund tax would increase $12 million a year. Through 1983, we have never earned that much in the United States in after tax profit on this product in any single year of our 25 years in the business. And we believe we are, Mr. Chairman, the world's lowest cost producer.

The Committee will want to understand that polypropylene is manufactured all over the world and foreign plants pay no Superfund tax. Obviously, a U.S.-based plant taxed at an amount greater than its profit level cannot survive. Because it is a world commodity product, polypropylene is not priced based on cost, but rather on supply and demand in the world marketplace. Simply put we cannot pass on the tax, and we cannot absorb it.

To date this year, about one-third of the output of our Bayport, Texas plant was sold to export markets. Owing to world price pressures, we are selling in the export markets at close to cost just in order to keep the plant operating. With the new tax, it would no longer be possible to sell Bayport's output in the world market. Thus, the direct and specific cause of the possible closing of that plant would be the vast increase in the Superfund tax.

Superfund was designed to clean up toxic waste dump sites. Polypropylene is not toxic and not an environmental contaminant. Even when burned, it only emits the same carbon and hydrogen molecules that would have been emitted if it had been burned when still in its original state.

Further, HIMONT is currently spending millions of dollars to improve our manufacturing process. One benefit of these capital expenditures will be to eliminate effluents. It is especially ironic that HIMONT will produce an inert product in pollution-free factories, but be expected to pay an unconscionably high tax to pay for the pollution of others, who will largely be untaxed.

Those responsible for the wastes in dump sites should pay for the cleanup. Where there is no responsible party, the general fund should pay. But, the U.S. workers who make polypropylene should not have to pay with their jobs as they will under HR 5640.

One of the most sensible solutions would be to broaden the tax base for the Superfund program. Certainly an increase in the general revenues provided for the program would be one desirable alternative.

We would also suggest to the Committee that it give consideration to a tiered tax rate--or sliding tax scale--based on the ultimate end use of a feedstock. Polypropylene is a non-toxic derivative of propylene and the taxing structure should reflect the non-contaminating nature of this product.

As a corollary method of absorbing a portion of the tax burden, it is suggested that the Superfund tax not be imposed on feedstocks of products made for the export market.

Further, since Superfund currently taxes propylene imported into the United States, but not polypropylene, this promotes off-shore production, taking away jobs and contributing to the balance of payments problem.

The Committee should be aware, however, that the latter two suggestions would have only marginal impact on the problems created by a substantial tax on propylene.

We would also advise the Committee that certain tax rates contained in H.R. 5640 regarding inorganic feedstocks--specifically nitric acid--would severely impact several domestic Hercules plants. I understand this matter has been discussed with the staffs of several Senators by Hercules personnel.

We must, therefore, reiterate that the best solution is a broadly based tax, at an amount which can be efficiently and effectively spent by the Environmental Protection Agency and with an eye carefully cast toward the impact this tax will have on the continued viability of an entire segment of U.S. industry.

STATEMENT OF KATHARINE CAPLES, REPRESENTATIVE, FEDERAL GOVERNMENTAL AFFAIRS, AMAX, INC., WASHINGTON, DC

Ms. CAPLES. I am Kit Caples, testifying today on behalf of AMAX, a diversified natural resources corporation. AMAX produces a variety of metals and chemicals, a number of which have been subject to the Superfund feed-stock tax. We urge that any reauthorization of Superfund consider the following points. If the present feed-stock tax structure is retained, we believe that copper, nickel, and zinc should not be taxed as feed stocks and that any tax affecting nonferrous metal should have special rules to mitigate adverse impacts on the domestic-metals industry. We do support the views of others who have testified today with respect to copper and zinc metals. For the purposes of consideration under Superfund, I would like to make note that nickel and zinc are very similar. Both are naturally occurring in the environment and relatively nontoxic. Nickel, for instance, is found in all soils and is therefore in petroleum as a natural-occurring substance. Both are considered to be essential to human metabolism. Nickel metal generally is regarded as safe by the Food and Drug Administration. Both are used primarily to make products that do not release the metals into the environment, and both are extremely stable in the environment in their metal form. Nickel is used mainly as an alloy with stainless steel and, of course, the major market for zinc is for galvanizing to protect steel. Both are produced by industries which are currently suffering severe economic hardship. If, as the House bill proposes, a potential tax of $30 a ton is placed on these metals, the continued operation of some facilities could be jeopardized. With respect to nickel, AMAX owns and operates the only nickel cobalt refinery in the country, in Louisiana. Nickel prices are at the same price today as they were 9 years ago, and on a constant dollar basis are at a 15-year low. Any increase in price by AMAX would have resulted in immediate loss of sales, and we are not able to pass our costs on. With respect to the nonferrous metals rules, we would like to make note of several items we think should be considered if, in fact, some metals are left on the tax list. We think the tax on imports should include the nonferrous-metal content of any fabricated material. We think the primary producers of the nonferrous-metals should not be discriminated against in favor of the secondary producers. We think that nonferrous-metal-bearing materials should not be taxed until they have been refined, the state at which the metal is commercially sold. We think exports should not be taxed since we are in a worldwide competitive metals market. And finally, we think a waste-end tax should not be imposed on the metals industry. It would not provide an incentive for us to produce less waste. If we are to extract metals from the ground, we have no control over how much waste rock is generated, and—since it is not paid by foreign producers, it would place domestic producers at a very unfair competitive disadvantage in the world metals market. I have some additional material that I would like included in the record on these metals.

Senator SYMMS. Thank you very much. We will put it in the record for you. Mr. Campbell.

[Ms. Caples' prepared written statement and related metals materials follow:]

STATEMENT OF KIT CAPLES
Federal Affairs Representative
AMAX Inc.

before the

COMMITTEE ON FINANCE
U.S. SENATE

21 September 1984

Thank you, Mr. Chairman. I am Kit Caples, Federal Affairs Representative, AMAX Inc., testifying today on behalf of AMAX, a diversified natural resources corporation. AMAX produces a variety of metals and chemicals, a number of which have been subject to the Superfund feedstock tax.

We urge that any reauthorization of Superfund consider the following points:

- If the present feedstock tax structure is retained, copper, nickel, and zinc should not be taxed as feedstocks under 26 USC 4661.
- Any tax affecting nonferrous metals should have special rules to mitigate adverse impacts on the domestic metals industry.

COPPER, NICKEL, AND ZINC SHOULD NOT BE LISTED

We support the views of others who have testified before your Committee regarding the listing of copper and will focus our remarks today on the issue of whether nickel metal and zinc metal should be listed. For the purposes of consideration under Superfund, nickel and zinc are very similar.

- Both are naturally occurring and relatively nontoxic. Nickel, for instance, is found in all soils and is therefore in petroleum as a naturally occurring substance.
- Both are considered to be essential to human metabolism. Nickel metal is generally recognized as safe by the FDA. Zinc is an essential element for man's nutrition and general good health.
- Both are used primarily to make products that do not release the metals into the environment. Nickel is

used mainly as an alloy with stainless steel while a major market for zinc is for galvanizing to protect steel.

- Both are produced by industries which are currently suffering severe economic hardship. If, as H.R. 5640 proposes, a potential tax of $30.00 a ton is placed on these metals the continued operation of some facilities could be jeopardized.

Nickel and Zinc are Relatively Nontoxic

Nickel metal is considered relatively nontoxic by the Environmental Protection Agency, the National Academy of Sciences, and the World Health Organization. The Food and Drug Administration has formally classified nickel as Generally Recognized as Safe (GRAS).

Zinc is not only considered nontoxic to humans, but is used extensively as a health and medical treatment aid. Indeed, the major health problem in the United States identified with zinc is a zinc deficiency in the American diet.

In addition to being relatively nontoxic, nickel and zinc metals are extremely stable in the environment. The primary use of nickel metal (86%) is for stainless steel and other inert metal alloys. The cutlery you eat with and the coins you carry in your pocket are such alloys. In asimilar manner, the primary use of zinc metal is for galvanizing to protect steel and other metals from corroding. Less than 1% of the zinc consumed in the U.S. is used in making zinc bearing compounds.

Because nickel and zinc are considered nontoxic to humans and because the metals themselves do not constitute the kind of "feedstocks" that are normally turned into dangerous chemicals by downstream industries, we believe that nickel and zinc should not be included in the list of taxable chemicals under the Superfund "feedstock" tax.

U.S. Nickel Industry is Economically Depressed

Apart from the fact that there is no scientific basis for listing nickel and zinc, the economic impact of such a tax will be so severe that it should not be imposed. Similar to other metals, nickel and zinc are commodities which are traded on a world wide basis. Prices of such metals are determined by free commodities exchanges such as the London Metals Exchange and are unresponsive to any particular national tax. In addition to substantial foreign competitive advantages due to little or no environmental control costs, government subsidies, and cheap labor, foreign metals are regularly sold at below their already low cost to penetrate United States and other markets in order to obtain badly needed hard currencies.

In the case of nickel, AMAX owns and operates the only nickel refinery in the United States. Although we have been paying a Superfund tax on nickel and cobalt for over three years now, we have not been able to pass on the tax to our customers. Due in part to nickel entered into the world market by the Soviet Union to earn hard currencies, nickel prices are at the same price they were nine years ago and on a constant dollar basis are at a fifteen year low. Any increase in price by AMAX would have resulted in immediate loss in sales.

Because of extremely low prices, the AMAX nickel refinery has been unprofitable during most of its nine years of operation. AMAX has significantly reduced costs by improving labor productivity and energy efficiency, but there are very few prospects of further reducing costs. With few costs left to cut and no current profits to assist in covering the tax, a continuation of the present tax (let alone trebling the tax) will have a direct and immediate adverse economic impact on the refinery.

While the tax may seem small in relation to the overall fund, it equates to 16 fewer jobs at the refinery. The refinery has already been forced to reduce its employment by one third since 1980. Continued nonprofitability may ultimately result in closure with the consequence that the United States will lose its only capability to refine the strategically important metals of nickel and cobalt.

As noted, nickel is naturally occurring in the environment and therefore is found in all petroleum and many of its product derivitives. It is particularly unfair to tax AMAX to not only clean up waste sites generated in an era when domestic nickel production was negligable or non-existent, but sites where the petroleum, petrochemical industry may have contributed to the hazards as well.

U.S. Zinc Industry is Economically Depressed

Although the United States' zinc industry consists of a number of primary and secondary producers, is has also experienced the depressed economic conditions currently found in the nickel industry and is only beginning to recover. In a little more than a decade there has been a drastic erosion of the United States' competitive position in the world zinc market.

In 1933 the industry produced less than one third of its 1970 levels. Between 1969 and 1983, four of 14 zinc smelters closed. Dependency on foreign zinc production has increased from 20-25% a decade ago to 70% in 1983. The U.S. Department of Commerce publication entitled "1984 U.S. Industrial Outlook" stated: "Import penetration is expected to continue to increase as other countries expand capacity."

When Superfund was passed in 1930, the Congress wisely made a conscious decision to not tax zinc but rather to tax two zinc bearing compounds. The decision was based not only on recognition of zinc's low toxicity, but also on its concern for the industry's depressed economic condition. The zinc industry has not yet recovered and should continue to be spared from such a tax.

TAXING OF NONFERROUS METALS

Assuming that copper, nickel, and zinc are not listed as taxable substances under the Superfund, AMAX Inc. still has concerns that any nonferrous metals which may remain on the list be treated in a fair way. As stated above, metals are a world market commodity which will often preclude the passing on of any national taxes such as the Superfund tax. The following suggestions, while not eliminating certain foreign competitive advantages, will at least not further harm the domestic metals industries to the benefit of foreign producers:

- Tax on imports should include the nonferrous metal content of any fabricated material, any alloy or compound containing 5% by weight of the metal, or lead acid batteries (assuming lead is taxed).
- The primary producers of nonferrous metals should not be discriminated against in favor of the secondary producers.
- Nonferrous metal bearing materials should not be taxed until they have been refined to the state at which the metal is commercially sold.
- Transitory substances produced during the processing of metals should not be taxed unless removed from the process for sale or use.
- Exports should not be taxed.
- Tax should be imposed at the point of purchase and collected from the purchaser by the seller.
- A waste-end tax should not be imposed on the metals industry.

Extending the tax on imports to those imports of fabricated metal products containing a taxable nonferrous metal will ensure that foreign producers will not be able to circumvent the tax by selling to intermediate fabricators who take refined metal and make it into various shapes and forms (e.g., wire, rod, and sheet) and then have the shapes imported to the United States. Some competitive imbalances will remain because this tax would not extend to consumer products (with the exception of lead acid batteries) and would not prevent substitution of other materials for the metals.

A specific comment on lead batteries is warranted. Because automobile batteries represent a substantial source of lead imported into the United States, they should be included in any import tax on lead metal. While we believe that primary and secondary metals producers should be treated equally, the fact that substantial amounts of lead batteries are recycled warrant special consideration. We suggest that the tax on lead be reduced to reflect the fact that a certain amount of lead is recycled and never enters the environment.

The position suggesting that pre-refining metal bearing materials and transitory in-process substances not be taxed is really a clarification of present law that only materials produced in commercial form and intended for sale should be taxed.

The provision that exports not be taxed is important if the domestic metals industry is to have any chance to compete overseas. Despite the many competitive advantages foreign producers have, domestic producers may be able to compete in certain metals markets because of high efficiencies and technologies. A tax on all domestic production, including that destined for overseas, would destroy any such opportunity.

Collection of the tax from the purchaser will not prevent domestic metals producers from having to absorb some of the Superfund tax, but we believe it will assist in passing on the tax. For example, where prices are fixed (e.g., when pegged to the London Metals Exchange price) the imposition of the tax on top of the price (as opposed to being on the producer's sales to be recouped by higher prices), may allow some transference of the tax.

Finally, a waste-end tax which would not be paid by foreign producers would grant a major competitive advantage directly to such producers.

1984 U.S. INDUSTRIAL OUTLOOK

Prospects for over 300 industries

U.S. DEPARTMENT OF COMMERCE
Malcolm Baldrige, Secretary

Bureau of Industrial Economics
Edward K. Smith, Director

January 1984

Lead = p 19-3
Zinc = p 19-6

19

Nonferrous Metals

COPPER

Current Situation

In spite of a significant increase in refined copper consumption, domestic producers found 1983 a difficult year. The recovery in the producing sector, from the near disastrous levels of 1982 was hampered by a continuation of relatively low prices caused largely by a very sharp increase in imports. Unlike many metals that are significantly dependent on demand from one or two major consuming industries, copper use is dispersed into almost all economic sectors. Total consumption of refined copper in 1983 increased to 2.1 million tons, from the severely depressed levels of 1982. In spite of this increase, which was mostly the result of the recovery in the automotive and construction sectors, 1983 consumption remained below the average consumption level attained during the past 5 years.

Copper is widely traded on the New York Commodity Exchange (COMEX) and the London Metal Exchange (LME). The prices established on these exchanges reflect world supply-demand conditions and directly influence U.S. and world producer prices. Several countries that rely heavily on copper as a major source of foreign exchange are reluctant to cut production and in fact tend to increase output as prices fall in an effort to stem the erosion of needed currency. This situation was evident in both 1982 and 1983. The lack of market responsive production policies on the part of foreign producers directly contributed, in 1983, to a world oversupply condition and an increase in world refined inventories, which in turn retarded price recovery. In 1983, the International Monetary Fund (IMF) agreed to help several foreign producers offset 1982 revenue declines, which were in part caused by their own high levels of production. This support by the IMF and other loan and financing policies caused U.S. producers to lodge strong protests with Congress.

1983 Profile

Primary Copper

SIC Code: 3331

Industry data	
Value of industry shipments (mil $)	4,404.4
Value added (mil $)	n a
Total employment (000)	7.0
Total number of establishments[1]	27
Number of establishments with less than 20 employees[1]	0
Percent of industry shipments accounted for by 4 largest companies[1]	87
Major producing states accounting for largest percent of industry shipments: AZ (67%), UT (14%), NM (10%)	
Product data	
Value of product shipments (mil $)	3,384.5
Value of exports (mil $)	50.2
Value of imports (mil $)	860.4
Exports as a % of shipments	1.5
Imports as a % of new supply[2]	20.3
Imports as a % of apparent consumption[3]	20.5

[1] 1977 Census of Manufactures

[2] New supply is the sum of product shipments plus imports

[3] Apparent consumption is the sum of product shipments plus imports less exports

Source: Bureau of the Census and Bureau of Industrial Economics. Estimates by Bureau of Industrial Economics

Early in 1983, copper prices recovered from the extremely depressed levels of 1982. COMEX prices rose from about 67 cents a pound in December 1982 to about 79 cents in May 1983. The increase resulted from a strong improvement in demand, heavy Chinese buying in Europe, and renewed speculative interest. Despite the possibility of a domestic strike, prices stalled in June and began to decline, falling below 65 cents in October. Throughout the summer and early fall, the market ignored numerous bullish factors, such as improved demand, strikes, and political unrest in foreign producing countries, and seemed to react only to bearish supply factors. Overall, U.S. producer prices in 1983 averaged about 78.0 cents a pound, up 7 percent from 1982. Even with improved price levels, most domestic and foreign production facilities remained unprofitable during the year.

The world oversupply caused foreign producers to aggressively seek an outlet for their material. Refined imports rose about 110 percent, to about 600,000 tons, in 1983. Imports from Chile, whose production facilities are either government owned or controlled, soared 285 percent during the first 5 months of 1983 compared to the same 1982 period. Imports from other countries also increased during these 5 months: Zaire, up 85 percent, Zambia, up 41 percent, Canada, up 29 percent. A large portion of these imports were not consumed during 1983, causing a drastic rise in visible stocks (COMEX stocks rose 86,000 tons or 31 percent during the first 7 months) and unreported stocks. Domestic exports remained insignificant during the year.

Domestic producers were unable to take advantage of demand increases because of the high level of imports, relatively low prices, and strikes, which began in July and August. Domestic production increased a marginal 2 percent in 1983. Although several producers, notably Kennecott and ASARCO, reached new labor contracts in July, others, notably Phelps Dodge, were struck by the United Steel Workers. Attempts by

Refined Copper in the United States

(in thousands of short tons)

Item	1978	1979	1980	1981	1982	1983[1]	1984[1]	1988[1]
Consumption	2,413	2,380	2,053	2,232	1,828	2,100	2,210	2,390
U.S. supply	2,060	2,219	1,896	2,246	1,868	1,910	1,950	2,100
Primary	1,597	1,670	1,351	1,702	1,353	1,460	1,500	1,600
Secondary	463	549	545	544	515	450	450	500
Producer inventories	188	78	54	159	295	250	275	—
Imports								
Refined[2]	457	237	505	364	285	600	440	325
Percent of consumption	18.9	10.0	24.6	16.3	15.9	28.5	22.0	13.6
Scrap unalloyed	23	24	25	30	31	50	30	2.5
Exports								
Refined	101	82	16	27	34	30	30	35
Scrap unalloyed	54	59	68	55	60	55	60	55
U.S. Producer Price[3] (cents per pound)	65.8	92.2	101.3	84.2	72.8	78.0	—	—

[1] Estimate.

[2] General imports.

[3] *Metals Week* average, in cents per pound.

management to operate struck facilities were met with strong and, at times, violent worker resistance. Hardest hit by these strikes and the effect of high import levels were the many small and remote communities that rely almost solely on the copper economy. The mining communities of Arizona were especially affected during 1982 and 1983.

Outlook for 1984

The demand for copper from the durable goods, automotive and construction sectors is expected to increase in 1984, especially during the second half. Overall, refined copper consumption should rise about 5 percent, to 2.2 million tons, by year-end. Although the percentage increase appears slightly encouraging, the tonnage consumed will remain below the 1978-81 average. A signficant change in interest rates—a major factor in automotive and construction activity—could change this expectation. Higher rates would probably cause demand to fall below this projection, while lower rates could result in a sharp demand increase beyond that envisioned.

Domestic producers will enter 1984 in a weak financial position and wili again be burdened by excessive inventories. The high level of 1983 imports and resulting inventory positions will prevent domestic production increases during the first half of 1984. During the second half, a price recovery could occur as other market economies recover and world inventories decrease. Prices approaching 85 cents are likely by year-end. Although domestic inventories will remain a problem throughout 1984, domestic producers are expected to increase production about 2 percent, to 1.95 million tons, in response to higher price levels.

Imports are expected to decline to more traditional levels during 1984, when they should drop about 27 percent, to 440,000 tons. If, for whatever reason, imports do not decline significantly from 1983 levels, domestic producers will face serious problems. A high level of imports would probably force U.S. producers to either cut back or close production facilities. Exports of refined copper are expected to be insignificant during the year.

Decisions on several environmental issues are likely to occur in 1984. The outcome of these decisions could be of significant importance to the domestic copper industry and affect the in-

Shipments of Copper-Base Mill and Foundry Products

(millions of pounds)

	1978	1979	1980	1981	1982
Total mill and foundry products	6,174	6,688	5,823	5,987	4,846
Brass mill products, total	2,679	2,981	2,475	2,622	2,014
Unalloyed total	989	1,111	990	927	767
Rod	107	104	146	123	101
Sheet	225	243	213	206	134
Tube	657	764	631	598	532
Alloyed total	1,781	1,870	1,485	1,695	1,247
Rod	860	885	696	765	565
Sheet	775	831	670	792	582
Tube	146	154	119	138	100
Copper wire mill products, total	2,775	3,048	2,814	2,847	2,393
Bare	335	236	296	328	267
Insulated					
Communication	659	845	805	755	594
Other	1,781	1,967	1,713	1,764	1,532
Brass and bronze foundry, total	565	593	487	471	405
Copper base powder, total	65	66	47	47	34
Unalloyed	45	49	36	40	28
Alloyed	20	17	11	7	6
Brass mill imports, total	435	377	248	442	334
Unalloyed	146	141	89	118	104
Alloyed	289	236	159	324	230
Percent of brass mill shipments	16	13	10	17	11

[1] Bureau of Industrial Economics.

dustry's future competitive position. New regulations controlling acid rain and arsenic would cause western smelter costs to rise. The copper industry continues to incur significant costs for pollution control facilities. Phelps Dodge, for example, will spend about $130 million on its Morenci, Arizona, smelter to bring it into compliance with state and Federal clean air regulations.

Long-Term Prospects

For the past decade, the intensity of copper use, when measured in tons per dollar of output of the consuming industry, has been declining in about 70 percent of the copper-using sectors. These long-term declines result from substitution, miniaturization, and automotive downsizing. In addition, an analysis of copper use indicates that few, if any, significant new markets have been developed. The downward trend in copper consumption is expected to abate somewhat during the 1980's. Between 1984 and 1990 consumption is expected to grow at a compound rate of about 2 percent. In the shorter term, copper consumption could experience a significant upturn in 1985 if interest rates do not rise and the European economy recovers.

Fiber optics are expected to make increasing inroads into the copper cable telecommunications market between now and 1988. Several fiber-optic systems have been installed, and more are planned. The increased use of fiber optics will retard copper consumption in this market but is not expected to have a significant effect until the 1990's. During the 1990's, it is likely that copper will permanently lose a significant portion of the telecommunications market.

The prospects for the domestic copper-producing industry during the next several years are unclear. U.S. producers have been deeply injured by the events of 1982 and 1983. They have incurred substantial losses and have been forced to increase their debt burdens. In addition, domestic producers will continue to face costly environmental regulations and competition from government-owned or -subsidized foreign producers, whose production policies tend to ignore weak market conditions. The health of the domestic copper industry will directly depend on an increase in price above current levels. Any meaningful increase in price is unlikely to be sustained without a corresponding increase in demand. If prices cannot be sustained above $1.00 a pound within the next 2 years, it is likely that domestic producers will permanently close several higher cost facilities.

With capacity expansion lagging or nonexistent, and existing plant and equipment not actively being replaced or modernized, spot shortages of copper could occur if free market economies enter an expansionary phase. Given the long lead times involved in developing mineral deposits, serious domestic copper shortages are likely by the mid-1990's if development does not occur or if several domestic facilities close permanently.—*Robert C. Reiley, Office of Basic Industries, (202) 377-0575.*

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LEAD

Current Situation

The lead industry experienced little improvement during 1983, as lead consumption and prices remained extremely weak. A modest rise in lead demand during the second half of the year served to buoy lead consumption, but first-half consumption was down nearly 5 percent compared to the first 6 months of 1982. For the year, total lead consumption rose only 0.4 percent, to 1.19 million tons. High lead stocks and weak demand

Primary Copper (SIC 3331): Trends and Projections 1972-84

(in millions of dollars except as noted)

Item	1972	1977	1979	1981	1982[1]	1983[2]	Compound annual rate of growth 1972-83	1984[3]	Percent change 1983-84
Industry data									
Value of shipments[4]	2,771.1	3,918.1	5,646.3	5,366.2	3,595.4	4,404.4	4.3	—	—
Value of shipments (1972 $)[4]	2,771.1	3,032.6	3,182.6	3,356.0	2,755.9	3,133.5	1.1	3,040.0	-3.0
Total employment	1.1	3,040.0	-3.0	—	—	—	—	—	—
Total employment (000)	17.2	13.1	11.9	10.7	8.6	7.0	-7.8	8.0	14.3
Production workers (000)	14.4	10.6	9.8	8.5	6.6	5.2	-8.8	6.2	19.2
Average hourly earnings of production workers ($)	4.82	8.13	9.99	12.62	13.63	14.34	10.4	—	—
Capital expenditures	119.7	D	90.8	D	—	—	—	—	—
Product data									
Value of shipments[5]	2,898.7	3,923.8	4,432.8	5,470.8	2,668.5	3,384.5	1.4	—	—
Value of shipments (1972 $)[5]	2,898.7	3,006.7	2,488.9	3,317.6	1,900.0	2,225.0	-2.4	2,340.0	5.2
Product price index (1972 = 100)	100.0	130.2	177.6	164.2	142.2	156.6	4.2	—	—
Trade									
Value of exports	190.5	82.4	156.8	73.0	49.3	50.2	-11.4	54.0	7.6
Value of imports	246.8	502.8	436.6	647.6	394.7	860.4	12.0	636.7	-26.0
Export shipments ratio	0.066	0.021	0.035	0.013	0.018	0.015	—	—	—
Import new supply ratio[6]	0.078	0.114	0.090	0.106	0.129	0.203	—	—	—

[1] Estimated except for product price index, exports, and imports.

[2] Estimated.

[3] Forecast.

[4] Value of all products and services sold by industry SIC 3331.

[5] Value of shipments of primary copper products produced by all industries.

[6] New supply is the sum of product shipments plus imports.

Source: Bureau of the Census and Bureau of Industrial Economics. Estimates and forecasts by the Bureau of Industrial Economics.

1983 Profile

Primary Lead

SIC Code: 3332

Industry data	
Value of industry shipments (mil $)	687.4
Value added (mil $)	n.a.
Total employment (000)	2.0
Total number of establishments[1]	3
Number of establishments with less than 20 employees[1]	0
Percent of industry shipments accounte for by 4 largest companies[1]	100

Major producing states accounting for
largest percent of industry shipments:
MO (75%), NB (25%)

Product data	
Value of product shipments (mil $)	1,004.6
Value of exports (mil $)	20.0
Value of imports (mil $)	60.2
Exports as a % of shipments	2.0
Imports as a % of new supply[2]	5.7
Imports as a % of apparent consumption[3]	5.8

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[1] 1977 Census of Manufactures.

[2] New supply is the sum of product shipments plus imports.

[3] Apparent consumption is the sum of product shipments plus imports less exports.

Source: Bureau of the Census and Bureau of Industrial Economics. Estimates by Bureau of Industrial Economics.

kept prices depressed as the yearly average domestic producer price fell 18 percent, to 21.0 cents a pound, the lowest since 1975. Total refined lead production declined 5 percent, to 1.14 million tons, dramatizing the severely depressed market conditions of the secondary industry. Primary producers managed to increase their production about 3 percent, but only at the expense of secondary producers, whose production declined 11 percent.

The consumption of lead by the storage battery industry, the largest end-use sector, accounting for 65 percent of total consumption in 1982, rose a modest 3 percent, to 800,000 tons. Improved demand for replacement batteries because of the unusually hot summer and low battery inventories caused battery makers to step up production, which increased lead consumption during the second-half of 1983. In addition, lower interest rates sparked automobile production, which stimulated lead demand for original equipment batteries.

The second largest market for lead is tetraethyl lead (TEL), a gasoline antiknock additive. Lead consumption in TEL has been declining since 1975, when environmental regulations limiting the use of lead in gasoline were adopted. In 1983, the decline in lead use in TEL continued, as consumption fell 24 percent to 100,000 tons. This substantial decline can be attributed, in part, to a general decrease in gasoline consumption, as well as the continued erosion of leaded gasoline's market share. More importantly, stricter EPA regulations governing the amount of lead large refiners may add to a gallon of leaded gasoline became effective in November 1982. By July 1, 1983, the regulation limited the amount of lead in leaded gasoline to 1.1 grams per gallon for all refiners. The stricter regulation was in response to the changing product mix of domestic refiners. Prior to this, the EPA used a pooled standard, in which refiners were permitted to add 0.5 grams of lead per gallon of gasoline averaged over total gasoline production. As unleaded gasoline's market share increased, refiners added more lead to their leaded product while continuing to comply with total lead in gasoline standards. The new regulation, in conjunction with leaded gasoline's falling market share, undoubtedly will cause continued declines in the consumption of lead by refiners.

Lead use in pigments, the third largest demand sector, rose slightly to 70,000 tons. This reflects the weak improvement in the heavy and commercial construction sectors and in certain consumer product sectors such as glass and ceramics. The resurgence in residential construction did nothing to support lead pigment demand, because lead pigments are no longer used in house paints.

The demand for lead in other end-use sectors rose modestly to 215,000 tons. Market weaknesses that began in 1982 in the ammunition, type metal, solder, and other construction sectors persisted throughout 1983. This restrained increases in lead use for these categories.

Persistent poor demand and a worldwide glut of refined lead continued to suppress lead prices in 1983. The U.S. producer price fell to a 7-year low at midyear, when the monthly average price bottomed near 19 cents a pound. As a result, the domestic producer price in 1983 declined 18 percent to 21.0 cents a pound. In just 3 years, the domestic producer price fell more than 50 percent, from 42.5 cents in 1980 to 21.0 cents.

A resurgence in zinc prices during the year only compounded problems for the lead industry, because zinc is a by-product in the production of lead. Higher zinc prices not only spurred zinc production, it caused an increase in lead production without a commensurate improvement in demand.

For the first time in 10 years, primary production exceeded secondary production in 1983. Low refined metal prices forced primary producers to increase lead production to 80-90 percent of capacity in order to reduce unit costs and generate positive cash flows. On the other hand, historically low prices created a severe cost/price squeeze for secondary producers. Even though scrap lead prices decreased with the decline in primary refined prices, the scrap price fall was not proportional to the fall in primary prices. Scrap lead battery plates, at 4-5 cents a pound, were too expensive for secondary producers to reprocess at a profit. The high cost of scrap feed, relative to the price of primary metal, caused an erosion of profit margins for virtually every producer. Some secondaries were forced to shut down their smelters and buy primary refined lead for their fabricating operations. In addition, scrap dealers significantly reduced their collection and processing of lead scrap during the year, favoring higher priced scrap metals. This reduced scrap availability and caused the secondary industry's operating rate to fall to near 50 percent of rated capacity.

Outlook for 1984

A sustained increase in overall economic activity and improved demand from the automotive and replacement battery sectors should enable the lead industry to experience a moderate recovery in consumption in 1984.

Total lead demand should rise about 5 percent to 1.25 million tons. Increased demand for lead by battery makers should account for the bulk of this growth. Lead consumption in both the original equipment and replacment battery sectors should grow to 845,000 tons, which is near 1981 consumption levels. Replacement battery demand is very responsive to severe weather.

Primary Lead (SIC 3332): Trends and Projections 1972–84

(in millions of dollars except as noted)

Item	1972	1977	1979	1981	1982[1]	1983[2]	Compound annual rate of growth 1972–83	1984[3]	Percent change 1983–84
Industry data									
Value of shipments[4]	460.9	699.6	1,333.1	948.8	702.3	687.4	3.7	—	—
Value of shipments (1972 $)[4]	460.9	341.1	377.0	370.2	320.3	335.5	2.8	353.0	5.2
Total employment (000)	2.8	2.8	2.9	3.0	2.4	2.0	3.0	2.2	10.0
Production workers (000)	2.3	2.0	2.3	2.3	1.8	1.4	-4.4	1.6	14.3
Average hourly earnings of production workers ($)	4.39	7.37	9.24	11.60	12.57	13.19	10.5	—	—
Capital expenditures	5.7	D	23.6	29.7	—	—	—	—	—
Product data									
Value of shipments[5]	682.2	1,268.9	1,991.8	1,519.1	1,169.6	1,164.6	3.6	—	—
Value of shipments (1972 $)[5]	682.2	572.4	558.1	531.2	494.8	480.9	3.1	510.0	6.1
Product price index (1972 = 100)	100.0	225.8	360.2	288.0	236.4	208.9	6.9	—	—
Trade									
Value of exports	2.5	3.2	16.7	21.6	45.4	20.0	20.8	22.0	10.0
Value of imports	66.0	160.4	218.7	94.4	61.1	60.2	-0.8	65.0	8.0
Export/shipments ratio	0.004	0.003	0.008	0.014	0.038	0.020	—	—	—
Import/new supply ratio[6]	0.088	0.112	0.099	0.059	0.050	0.057	—	—	—

[1] Estimated except for product price index, exports, and imports.
[2] Estimated.
[3] Forecast.
[4] Value of all products and services sold by industry SIC 3332.
[5] Value of shipments of primary lead products produced by all industries.
[6] New supply is the sum of product shipments plus imports.

Source: Bureau of the Census and Bureau of Industrial Economics. Estimates and forecasts by the Bureau of Industrial Economics.

A cold winter is likely to increase replacement battery demand, but a mild winter, like the one experienced in 1982-83, could serve to weaken it.

TEL demand should continue to decline as leaded gasoline loses market share with each new automotive model year. Lead consumption in TEL should decline about 10 percent, to 90,000 tons. Increased activity in the construction, glass, and ceramics sectors should bring about a rise in lead pigment consumption of about 10 percent, to 78,000 tons.

In 1984, total domestic production of lead should rise about 4 percent, to 1.19 million tons. The problems experienced by the secondary industry should continue through the first half of the year or until the high level of lead stocks overhanging the market are reduced. Gradual increases in industrial activity and modestly higher refined lead prices should generate a slight improvement in scrap supply and provide a modest widening of producer margins. Secondary production is expected to increase 7 percent, to 600,000 tons, still well below secondary capacity of 1 million tons. Primary production should increase about 2 percent, to 590,000 tons.

Long-Term Prospects

Between now and 1988, the domestic lead industry is not expected to experience dynamic growth. The industry's long-term prospects depend largely on the stringency of environmental regulations and the development of new markets.

Environmental regulations continue to threaten the domestic lead industry. Pollution control costs currently account for roughly 30 percent of the industry's total capital expenditures, and the industry regards the current ambient air lead standard of 1.5 micrograms per cubic meter of air as unattainable given today's technology. EPA's development of a new Air Quality Criteria Document in late 1983 could be used to create a new lead standard, but it is unlikely the ambient air standard will be revised. Compliance problems will most likely be handled by negotiated settlements, extensions, and waivers. For example, OSHA, which promulgates workplace standards, proposed just such an approach in 1983. Realizing the 1978 workplace standard was too stringent and costly, OSHA proposed tailoring compliance plans to individual primary plants and developing various engineering controls to be used as a basic guide for

Lead in the United States

(thousands of short tons, except as noted)

Item	1978	1979	1980	1981	1982	1983	1984[1]	1988[1]
Consumption[2]	1,579	1,497	1,180	1,287	1,185	1,190	1,250	1,380
Total Production[2]	1,474	1,520	1,349	1,256	1,194	1,140	1,190	1,310
Primary	629	640	607	551	565	580	590	600
Secondary	845	880	742	705	629	560	600	710
Producer Inventories (eop)	19	51	61	88	81	95	90	—
Imports[3]								
Refined lead	249	201	90	113	101	125	110	110
Percent of Consumption	15.8	13.4	7.6	8.8	8.5	10.5	8.8	8.0
Ores and concentrates	58	44	49	65	39	40	40	45
Total imports (lead content)	307	245	139	178	140	165	150	155
Percent of consumption	19.4	16.4	11.8	13.8	11.8	13.8	12.0	11.2
Exports (refined lead)	8	12	181	26	61	25	35	40
U.S. Producer Price[4] (cents per pound)	33.7	52.6	42.5	36.5	25.5	21.0	—	—

[1] Estimates by Bureau of Industrial Economics.
[2] U.S. Bureau of Mines.
[3] Lead materials except scrap.
[4] Metals Week average.

secondary lead and battery industry compliance. Any inflexibility on the part of regulatory agencies, however, could result in a permanent loss of domestic capacity by 1988.

Lead consumption is expected to increase 3 percent a year, reaching 1.38 million tons in 1988. Lead use in batteries will continue to be the largest demand sector, growing 3-4 percent a year. The outlook for battery demand, however, has dimmed recently as the optimism once attached to load-leveling and electric vehicles has faded. Plentiful oil supplies and stable prices, and declining Government and private sector concern, have significantly reduced the market potential of new battery applications. In addition, the trend toward using less lead per battery is expected to continue, as companies vie to increase performance per pound of battery. New technologies, such as continuous grid casting, will result in significantly less lead being used per battery in the long term. In turn, this may impact the secondary industry, for as the lead content of batteries declines, recycling them becomes more expensive.

TEL demand should continue its downward trend, falling 8-10 percent annually. The demand for leaded gasoline will continue to decline, as the on-the-road population of automobiles that require unleaded fuel increases with each new model year. In the long term, a complete ban of leaded gasoline is not unlikely. Recent EPA studies show 17 percent of all vehicles requiring unleaded fuel are illegally using leaded gasoline. In addition, several EEC member countries are mounting a campaign to outlaw leaded gasoline in Europe. The United Kingdom, the Federal Republic of Germany, Denmark, and the Netherlands are stressing their commitment to lead-free fuel in the late 1980's. Similar proposals have been made by Canada. Although declining TEL consumption poses no threat to TEL producers, because TEL is a small portion of their business, it does mean significant losses for lead.

Clearly, substantial growth in lead consumption depends upon the development of new markets. Several new uses for lead show potential in the long term, but first the lead industry must overcome the general public's concern about the toxic effects of lead.

Significant market potential exists in such new applications as asphalt in road surfaces and roofing shingles, and as a stabilizing agent in plastics. In asphalt, lead diamyldithiocarbamate (LDAC) acts as an oxidation inhibitor and helps preserve asphalt road surfaces and roofing shingles. Initial market potential is projected to be 70,000 tons of lead a year, but with annual consumption of 30 million tons of asphalt, LDAC could provide significant growth potential. In plastics, lead can be used as a stabilizer in plastic pipes and other shapes. Initial market potential for this use is estimated to be 30,000 tons of lead a year.

The use of lead in auto body solder has been declining steadily because of OSHA workplace standards concerning worker exposure to airborne lead during the grinding process. Lead use in auto body solder will be banned entirely by 1986, but robotics could allow continued use of lead solder in auto bodies. The development of robotic grinding, however, is still several years away. Eventually, this use of lead could increase consumption by 80,000-100,000 tons a year.—*David Stonfer, Office of Basic Industries, (202) 377-0575.*

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ZINC

Current Situation

The U.S. economic recession ended in late 1982, and zinc (along with aluminum) led the recovery in the nonferrous metals sector during 1983. Zinc consumption increased 12 percent from its depressed 1982 level primarily because of increased demand from the automotive and steel sectors. The increase in demand, merchant shortages, and relatively low producer stock levels caused by inventory liquidation during 1982, caused prices to firm and then increase; by the end of August the price for benchmark High Grade was 46 cents a pound compared to 38 cents a pound at the beginning of 1983, a 21-percent increase. On the negative side, domestic production continued to decline.

The 1983 production decline was caused, in part, by the indefinite closure of ASARCO, Inc.'s Corpus Christi, Texas refinery. The closure was reportedly the result of the lack of sufficient feed material caused, in turn, by the closure of the East Helena, Montana zinc fuming plant and reduced availability of concentrates from Mexico. The Corpus Christi facility, with an annual capacity of about 114,000 tons, is the largest domestic zinc refinery. The closing left only four producers operating, with annual capacity of about 320,000 tons. This

1983 Profile

Primary Zinc

SIC Code: 3333

Industry data	
Value of industry shipments (mil $)	246.0
Value added (mil $)	64.9
Total employment (000)	2.0
Total number of establishments	5
Number of establishments with less than 20 employees	0
Percent of industry shipments accounted for by 4 largest companies	85

Major producing states accounting for
largest percent of industry shipments:
PA (29%), IL (24%), TN (20%),
OK (17%), TX (7%)

Product data	
Value of product shipments (mil $)	347.8
Value of exports (mil $)	1.0
Value of imports (mil $)	419.0
Exports as a % of shipments	0.3
Imports as a % of new supply[1]	54.6
Imports as a % of apparent consumption[2]	54.7

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[1] New supply is the sum of product shipments plus imports.

[2] Apparent consumption is the sum of product shipments plus imports less exports.

Source: Bureau of the Census and Bureau of Industrial Economics. Estimates by Bureau of Industrial Economics.

compares to capacity of more than 1 million tons in the early 1970's.

In other developments involving the producers, the Bunker Hill lead-zinc-silver refinery was sold, after several unsuccessful attempts, to a limited partnership, and Gulf and Western Industries, Inc., announced plans to divest itself of the Natural Resources Group. This Group includes Jersey Minere Zinc Company, Clarksville, Tennessee, 40 percent of which is owned by Union Minere, a Belgium-based firm.

Steel galvanizing continued to be the largest use of zinc, accounting for slightly less than 50 percent of total consumption. The principal use for galvanized steel is in the automotive industry. The outlook for zinc use in galvanizing is bright because of the need to provide better rust protection for automobiles. Chrysler Corporation has announced its intention to increase the use of "one-and-a-half-side" coated steel for outer body parts, "one-side" in outer hoods and decks, and "two-side" for previously uncoated inner body panels. Ford Motor Company has also announced increased use of galvanized steel in certain models. Parts to be galvanized include the inner and outer-hood panels, quarter panels, dash panels, and most of the door panels. The other automakers are taking similar actions. Primarily as a result of increased automobile output, increased quantities of galvanized steel in each automobile, and the increase in construction activity, zinc consumption in galvanizing amounted to 415,000 tons, 10 percent above the 1982 level.

Zinc use in diecastings is the second largest consuming market, accounting for 26 percent of total consumption. Since most diecastings are used in automotive applications, the resurgence of automotive output had a positive impact on diecasting consumption. In 1983, zinc consumption in diecasting totaled 224,000 tons, 6 percent more than in 1982.

Production of brass, an alloy of copper and zinc, is the other major demand sector for zinc, and brass use is dispersed among many economic sectors. With the economic recovery, consumption of zinc for the production of brass increased to 108,000 tons in 1983, 22 percent greater than the prior year level.

The amount of zinc used in other products increased 22 percent in 1983, to 127,000 tons, primarily because of increased zinc consumption in coinage. The substitution of zinc for copper in the penny has established a significant new market for zinc. The new penny contains 98 percent zinc with a 2 percent copper coating, compared to 95 percent copper and 5 percent zinc in the former penny. The decision to substitute zinc for copper was made because the price of zinc is below that of copper.

U.S. zinc production capacity declined substantially during the 1970's and early 1980's, leaving increased imports to fulfill domestic consumption requirements. In 1983, imports of slab zinc rose to 568,000 tons, 13 percent more than in 1982. Import penetration is expected to continue to increase as other countries expand capacity. Mexico, for example, in October 1982 brought on stream a new zinc refinery with an annual capacity of about 126,000 tons. A large part of this output is destined for the U.S. market.

Zinc prices began 1983 at 38 cents a pound and remained at that level until the end of April, when the price was increased to 40 cents a pound. The anticipation of a strong second half, reduced inventories, and reported shortages of merchant material caused the price to reach 46 cents by the end of August, 21 percent higher than at the start of the year.

Outlook for 1984

The revival of economic activity in 1983 is expected to continue in 1984. Increased output in the automobile industry, one of the two major zinc end-use industries, should provide the primary impetus for increased zinc consumption. Increased consumption is also anticipated in construction, the other major zinc end-use market; however, the level of interest rates could limit the extent of the increase in this sector. Relatively low zinc inventories and reduced domestic production capacity indicate that shortages of the metal could develop, making further price increases possible, although at a more moderate rate than in 1983.

Continuation of the upward trend in the economy in 1984 should cause zinc demand to increase to 924,000 tons, 6 percent more than in 1983. An estimated 11-percent rise in automobile output will lead the increase in demand for zinc. Construction, advancing at a relatively modest 4 percent, will also make a contribution.

Primarily because of increased automotive output, the amounts of zinc used in galvanized steel products and for diecastings are expected to increase 5 percent and 7 percent, respectively. Such increases will result in zinc consumption of 434,000 tons for galvanizing and 240,000 tons for diecastings. The consumption of zinc for the penny, estimated at 50,000 tons, will continue to provide a substantial market.

U.S. production of zinc is projected to increase 17 percent in 1984. Actual U.S. production levels could be significantly different than that projected, however, because of the uncertainty surrounding ASARCO's plans for its Corpus Christi,

Slab Zinc in the United States

(thousands of short tons)

Item	1978	1979	1980	1981	1982	1983[1]	1984[1]	1988[1]
Consumption[2]	1,158	1,103	894	920	782	874	924	1,151
Production	487	583	408	436	333	295	345	375
Producer inventories (end of period)	62	79	25	49	31	20	25	25
Imports[3]								
Slab zinc	686	581	453	675	503	568	584	776
Percent of consumption	59.2	52.6	50.7	73.4	64.3	65.0	63.2	—
Ores and concentrates	130	248	143	130	74	50	75	100
Total imports (zinc content)	816	829	596	805	577	618	659	876
Percent of consumption	70.4	75.2	66.7	87.5	73.8	70.7	71.3	76.1
Exports (slab zinc)	1	—	—	—	—	—	—	—
U.S. producer price[4] (cents per pound)	31.0	37.3	37.4	44.6	38.5	42.0	—	—

[1] Estimates by Bureau of Industrial Economics

[2] U.S. Bureau of Mines

[3] Bureau of the Census, Imports for Consumption

[4] *Metals Week* average

Primary Zinc (SIC 3333): Trends and Projections 1972-84

(in millions of dollars except as noted)

Item	1972	1977	1979	1981	1982[1]	1983[2]	Compound annual rate of growth 1972-83	1984[3]	Percent change 1983-84
Industry data									
Value of shipments[4]	376.4	430.7	574.0	468.1	270.1	246.0	3.8	—	—
Value of shipments (1972 $)[4]	376.4	228.1	276.5	187.0	124.5	101.5	−11.2	140.2	38.1
Total employment (000)	6.3	4.6	5.1	3.1	2.5	2.0	−9.9	2.3	15.0
Production workers (000)	5.2	3.5	4.0	2.3	1.8	1.4	−11.2	1.6	14.3
Average hourly earnings of production workers ($)	4.30	7.14	9.09	11.09	11.98	12.61	10.3	—	—
Capital expenditures	9.8	30.8	15.5	D	—	—	—	—	—
Product data									
Value of shipments[5]	457.9	523.3	659.3	669.3	310.2	347.8	−2.5	—	—
Value of shipments (1972 $)[5]	457.9	280.7	319.6	266.5	143.0	137.2	−10.4	—	—
Product price index (1972 = 100)	100.0	186.9	205.8	250.4	222.3	253.5	8.8	—	—
Trade									
Value of exports	2.1	2.0	1.0	0.8	1.7	1.0	−6.5	1.0	0.0
Value of imports	181.4	374.9	396.9	549.3	192.2	419.0	7.9	550.0	31.3
Export shipments ratio	0.005	0.004	0.002	0.002	0.005	0.003	—	—	—
Import new supply ratio[6]	0.284	0.417	0.376	0.505	0.383	0.546	—	—	—

[1] Estimated except for product price index, exports, and imports.
[2] Estimated.
[3] Forecast.
[4] Value of all products and services sold by industry SIC 3333.
[5] Value of shipments of primary zinc products produced by all industries.
[6] New supply is the sum of product shipments plus imports.
Source: Bureau of the Census and Bureau of Industrial Economics. Estimates and forecasts by the Bureau of Industrial Economics.

Texas, plant and the divestiture of Jersey Minere by Gulf and Western.

Zinc imports are expected to increase about 3 percent, to 584,000 tons. Imports may increase more than that, however, as new foreign producers, such as Mexico, attempt to expand their penetration of the U.S. market.

Long-Term Prospects

Zinc consumption in 1988 is expected to total slightly less than 1.2 million tons, an amount equal to its 1978 level. Galvanizing will continue to be the largest application for zinc, although competition for the protective coatings market is expected to intensify. Products using less zinc per unit than galvanized steel, such as galvalume (55 percent aluminum, 43.4 percent zinc, 1.6 percent silicon), should expand their share of the coatings market. The reduction in per-unit zinc consumption will, however, be partially offset by an expanding use of coatings, primarily through efforts by the automobile industry to increase the rust protection of their products. In addition, galvan, a coating of 95 percent zinc, 5 percent aluminum, and a small quantity of misch metal, has been developed by the International Lead Zinc Research Organization and is reported to have the potential to compete with galvalume.

The use of galvanized steel in residential construction has the potential for expansion. In some cases, galvanized steel studding, joists, etc. are reported to be more advantageous than wood. The extent of the increase in this market will depend upon builders acceptance of using steel instead of wood and the relative prices of the two competing materials.

The per-unit use of zinc in automobiles has substantially declined because of substitution by plastics and downsizing. The substitution of plastics for zinc is believed to have peaked, however, and although downsizing is expected to continue, the prospects for increased zinc consumption in automobiles is promising because of the concern for corrosion resistance. Therefore, the anticipated growth in automobile production should increase zinc consumption. Consumption of zinc for the penny will continue to provide a signficant stable market, and zinc-aluminum alloys should be a growth area for consumption.

Domestic zinc production capacity is not expected to expand between now and 1988, and indications are that further reductions in capacity are possible. The upward trend in imports should continue, which will increase competitive pressures on the domestic industry.—*James S. Kenneay, Office of Basic Industries, (202) 377-0575.*

Additional References

Zinc Industry Reports, Mineral Industry Surveys, Bureau of Mines, U.S. Department of the Interior, Washington, DC 20241.
Zinc, Mineral Commodity Profile, Bureau of Mines, U.S. Department of the Interior, Washington, D.C. 20241.
Nonferrous Metal Data, American Bureau of Metal Statistics, New York, NY.

ALUMINUM

The aluminum industry includes all of several SIC codes and parts of others. Industry and employment data are for primary production of aluminum (SIC 3334); aluminum sheet, plate, and foil (SIC 3353); aluminum extruded products (SIC 3354); aluminum rolling and drawing NEC (SIC 3355); and aluminum foundries (castings) (SIC 3361).

Aluminum product data also include secondary aluminum (part of SIC 3341), insulated or covered aluminum wire and cable (part of SIC 3357), aluminum powder and paste (part of SIC 3399), and aluminum forgings (part of SIC 3463).

Current Situation

The aluminum industry rebounded strongly from its depressed 1982 levels and, along with zinc, led the nonferrous metals industry in the recovery of 1983. The economic recovery caused aluminum product shipments to increase 12 percent, to

June 7, 1984

CRITIQUE OF "RATIONALE FOR TAXING ZINC" (ICF, Inc.)

The rationale paper contains several broad, as well as inaccurate, statements concerning zinc and arranges them in such a manner as to create the inference that zinc in most forms is hazardous to human health and the environment. The converse is, however, more accurate -- that is, zinc, except where combined with other chemicals that are generally toxic in and of themselves, does not present a danger to human health. Moreover, only an extremely small percentage -- 0.8 percent -- of zinc consumption or use in the United States is used in the manufacture of zinc bearing chemicals that are regulated as "hazardous substances."

Hazards

Statement #1: "Zinc and numerous zinc compounds (e.g., zinc cyanide, zinc phosphide) are designated hazardous substances under the CWA, CERCLA and RCRA, and are hazardous materials under DOT's Hazardous Materials Regulations (HMR)."

FACTS:

A. This statement is false regarding the designation of zinc as a hazardous substance and misleading in suggesting that the presence of zinc in compounds is the basis for such designation. Neither zinc metal nor zinc oxide, which together constitute 98% of total U.S. consumption of zinc, are designated as "hazardous substances" under:

- 311(b) of the Clean Water Act (CWA), which provides protection against "spills" of hazardous substances and oil (40 CFR 116, 117);
- RCRA (40 CFR 261.31, 261.32, 261.33);
- CERCLA (incorporates other statutes by reference); and
- DOT's Hazardous Materials Regulations (HMR) (49 CFR 122.01).

Consequently, the zinc-bearing chemical compounds listed as hazardous under Section 311(b) of the CWA (15 compounds), DOT's HMR (24 compounds), RCRA (2 compounds), and CERCLA, which merely incorporates these listings by reference, account for only 0.8% of U.S. consumption of zinc metal products. Moreover, the zinc-bearing chemical compounds listed as hazardous under these statutes are not designated as hazardous because of the presence of zinc, but rather because of the presence of other chemicals that are toxic in and of themselves, e.g. arsenic, cyanide, ammonium chloride, etc. It is thoroughly misleading to attribute the toxic effect of certain zinc salts to the zinc portion of the compound and is analgous to saying that sodium cyanide is toxic because it contains sodium.

B. Zinc's classification as a "toxic pollutant" under Section 307(a) of the CWA is a misnomer. Congress used the term "toxic pollutant" before EPA had ever classified zinc as such.

Background: EPA has recently promulgated (March 8, 1984) final regulations under Section 307(a) of the CWA setting forth effluent limitations and pretreatment standards for waste water discharges from nonferrous metal production, including zinc. (Waste water discharge from the production of zinc is to be regulated in terms of pH (acidity) and the amount of suspended solids of metal in the water -- at 0.42 mg/l which is actually less than the secondary standard for zinc under the Safe Drinking Water Act.) These regulations were required to be issued under the 1977 amendments to the Clean Water Act (section 307(a)) and pursuant to a 1976 consent agreement resulting from litigation brought by the Natural Resources Defense Council against EPA (NRDC v. Train). That consent agreement contained a list of 65 substances, including "zinc and compounds," and termed them "priority pollutants" for which EPA was to promulgate effluent standards. The settlement agreement was developed and finalized in 1976 between EPA and NRDC without any consultation with the industries affected, including U.S. zinc producers and consumers. Subsequently, the conferees on the 1977 CWA amendments acted independently of the House and Senate-passed bills to add new language incorporating by reference the list of 65 "priority pollutants" for which effluent standards were to be promulgated, but calling them "toxic pollutants," the pollutant category of greatest concern.

C. EPA has recognized the mininal toxicity of zinc in drinking water, and it is regulated under the Safe Drinking Water Act's secondary standards -- "based upon taste considerations." EPA states in its October 5, 1983 Advance Notice of Proposed Rulemaking (ANPRM) announcing a possible revision of the primary drinking water standards (emphasis added):

> "...Zinc is relatively non-toxic and is an essential trace element. A wide margin of safety exists between normal intake from the diet and the amount likely to cause oral toxicity. At drinking water concentrations high enough to cause gastrointestinal disturbances, zinc would impart a strong astringent taste and milky appearance in water. Zinc interacts with other trace metals and has a protective action against toxicity of cadmium and lead... Treatment for zinc reduction is limited to processes which reduce the corrosivity of water... and the WHO (World Health Organization) recommends that zinc be kept below 5 ug/l for aesthetic reasons." (See Federal Register, Vol. 48, No. 194, p. 45517.)

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Statement #2: "Elemental zinc exhibits a low toxicity. Some zinc salts are known or suspected carcinogens. Zinc compounds such as zinc oxide can cause metal fume fever and chills when its fresh fumes are inhaled, and zinc chloride causes ulcerations of the skin and mucous membranes. Some zinc compounds are also toxic to freshwater animal and plant species."

FACTS: This statement contains both glaring inaccuracies and overly broad generalizations that are misleading. Each element of this statement is discussed below.

A. "Elemental zinc exhibits a low toxicity." EPA describes zinc in its October 5, 1983, ANPRM on possible revisions of the primary drinking water standards as "relatively non-toxic and is an essential trace element."

B. "Some zinc salts are known carcinogens." EPA and the Food and Drug Administration have both said that excessive consumption of zinc is not carcinogenic.

1. The Food and Drug Administration (FDA) proposes to "affirm that zinc oxide and zinc sulfate are generally recognized as safe (GRAS), with specific limitations, as direct human food ingredients and to affirm that zinc chloride is GRAS as an indirect food ingredient." (See Federal Register, Vol. 47, No. 207, October 26, 1982, page 47441 ff.) FDA notes that 1971 and 1977 National Academy of Science/National Research Council surveys indicate that zinc oxide is used in such foods as breakfast cereals, dairy products, and reconstituted vegetables. Zinc sulfate is used in such foods an non-alcoholic beverages, beverage bases, and infant formula (Ibid, p. 47442).

2. FDA reports that excessive consumption of major zinc salts can induce temporary anemia and that these salts are not carcinogenic. In this connection, FDA's Select Committee on GRAS reported (as quoted in the proposed rule):

> "In general the most important effect of feeding excess zinc appears to be a specific microcytic anemia, probably related to changes in iron and copper utilization... extensive studies indicate that feeding zinc oxide or zinc sulfate at levels in excess of 500 mg of the salt per kg has no consistently adverse effect. It would appear that the nature of the compound plays a significant role in the toxicology of zinc." (Ibid.)

3. The Select Committee also stated that there was no evidence of carcinogenicity in rat studies involving the feeding of excessive levels of the following zinc salts: (1) zinc oxide, (2) zinc acetate, (3) zinc carbonate, (4) zinc sulfate. (Ibid.)

4. EPA's 1980 Ambient Water Quality Criteria for Zinc notes that there was "no evidence that zinc given via the oral route or parenterally (intravenously) could cause tumors." (page C-42) It further states that:

> "The mutagenic effects of zinc have been discussed by the National Research Council which could not find literature that suggested zinc is mutagenic in animals and human beings nor have any new data appeared on this subject. The same conclusions can be made with regard to tetragenesis. The greatest risk is related to zinc deficiency." (page C-46)

C. "Zinc compounds, such as zinc oxide, can cause metal fume fever..." This no longer occurs under modern industrial practices. Metal fume fever was in the past fairly common in zinc production workers that were exposed to very high concentrations of zinc fume prior to the advent of modern ventilation controls in the workplace. Such maladies do not occur due to general environmental exposure to zinc and this non-debilitating disease does not occur in today's workplace. In this connection EPA's Ambient Water Quality Criteria for Zinc (October 1980) further rebuts the rationale paper's assertion:

> "Metal fume fever only appears after exposure to freshly produced metal fumes which can penetrate deep into the alveoli. Zinc oxide dust or other metal dusts are not capable of producing the disorder... There have never been any fatalities from metal fume fever, nor does it cause long-term sequeler." (page C-28)

In sum, the only threat ever posed by metal fume fever was solely at the production point for zinc oxide and was a result of the fumes. Consequently, it is impossible for it to occur at a Superfund site and was a concern involving occupational safety and health for a limited number of metal workers -- a concern which no longer exists in today's zinc plants. In view of this, the rationale paper's assertion is both a gross oversimplification and irrelevant to Superfund.

D. "Zinc chloride causes ulcerations of the skin and mucous membranes." Zinc chloride can cause such ulcerations because of the presence of chloride, as an anion, not because of the zinc itself. As a concentrated chloride solution, zinc chloride is very acid, but the acidity diminishes rapidly on dilution by most solvents. It is used in several types of industrial processes to dissolve other organic substances, for skin wounds and was formerly used as a caustic. When used in medicine its "burning properties" are limited to the area of application.

E. "Some zinc compounds are also toxic to fresh water animal and plant species."

Chemical compounds that contain zinc may pose potential problems for aquatic animal and plant life if present in abnormally large concentrations and amounts. EPA's Ambient Water Quality Criteria for Zinc (October, 1980) discusses the acute and chronic toxicity of zinc to freshwater animal and plant life and essentially concludes, however, that most fish and plant species are not significantly adversely affected by the presence of zinc in water. Moreover, the numerous studies noting fish kills in the report are based on exposure to zinc chloride, zinc sulfate, and zinc nitrate -- compounds of zinc with other chemicals. In this connection, the Criteria Document states:

> "Paramount to the question of zinc toxicity are the physical and chemical state of the zinc, the toxicity of each form of the zinc, and the interconversion to be expected among the various forms. All zinc forms are presumably nontoxic unless they can be sorbed or bound by biological materials. Conversely, all zinc forms are potentially toxic (to aquatic life) if they can be sorbed or bound by biological tissues... Thus, the toxicity of undissolved zinc to any organism depends on feeding habits with the result that plants and most fish would be relatively unaffected by suspended zinc, but many invertebrates could be adversely affected by ingestion of sufficient quantities of particulates containing zinc... (Thus, the) toxicity of zinc, as well as other metals, is reported to be influenced by a number of chemical factors including calcium, magnesium, hardness, pH, and ionic strength. These factors appear to offset the toxicity of zinc by influencing the proportion of available zinc or by inhibiting the sorption of available zinc by biological tissues." (Pages B-2,3)

Consequently, the statement that suggests the mere presence of zinc compounds will destroy aquatic animal or plant life is a gross oversimplification of what appears to be a very limited impact.

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Statements #3 and #4: "Cadmium and some cadmium compounds (e.g., cadmium acetate, cadmium bromide, cadmium chloride), antimony and numerous antimony compounds (e.g., antimony pentachloride, antimony trioxide, antimony trifluoride), and mercury and mercury compounds (e.g., mercuric cyanide, mercury fulminate, mercury sulfate) are designated hazardous under the CWA, CERCLA and RCRA and are hazardous materials under HMR."

"Cadmium has been shown to be a teratogen, a carcinogen, and a mutagen. Cadmium is toxic to numerous plants and animals; it is also flammable and upon ignition can explode. Many antimony and mercury compounds are highly toxic or lethal when ingested or inhaled and are also irritants to the skin and mucous membranes. Some antimony compounds are known to form explosive mixtures with other compounds."

FACTS: While these statements are ostensibly correct, their use as a basis to impose a tax on zinc production is disingenous and misleading because it seeks to link zinc to cadmium's and mercury's toxicity. Moreover, the relative toxicity of metals is a function of the particular chemical form in which it is manifested, which in turn determines whether or not it is absorbable by tissue, and whether it occurs in toxic concentrations and toxic amounts. Zinc, however, is considered generally to be non-toxic and only mildly toxic to humans at excessive concentrations. Finally, H.R. 5640 proposes to impose a similar tax on cadmium and mercury and, consequently the inclusion of these statements suggest an attempt to "pad" the rationale for imposing a tax on zinc.

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Releases

Statement #5: Zinc, related metals, and their compounds have been found at the following number of the 881 Hazardous Ranking System scored sites:

Metal	Number of Sites
Zinc	106
Cadmium	122
Mercury	76
Antimony	5

FACT: The mere presence of zinc at the 106 sites in no way indicates whether zinc was even the problem to be resolved. The November 1983 report of ICF, Inc. to EPA, upon which this statement is based, notes that (emphasis added) "the data base also omits concentration data. The HRS data do, however, provide insights into the occurrence of exempt and associated substances relative to other substances used in scoring sites for hazardous content." ("Analysis of Substances Exempt from CERCLA Tax...," November 1983, ICF, Inc. at page 2-4.) Consequently, the only measure presented in the report was whether the metal was present in detectable amounts, not whether they presented any pollution problem. Metals, because of their persistency, are easily identified at very low concentration levels and, thus, can be expected to be found at most sites if an analysis for metals is conducted.

This same ICF study then "leaps" to the dubious conclusion that because substances are merely present at many sites, expenditures to clean them up will be "measurable." (page 2-15) In sum, the ICF study, by its own admission, lacks data on the concentrations and quantities of zinc at the NPL sites (p. 2-11), and assumes, in conjunction with the rationale paper, that the mere presence of a metal, such as zinc, is a basis upon which to launch a cleanup action.

Statement #6: "Typical examples of National Priority List (NPL) sites containing zinc, cadmium or mercury include:

- -- Iron Mountain Mines, Inc., Keswick, California: Contamination of soil, surface water, and groundwater by wastes deposited at tailing ponds and pits. Hazardous substances found include copper, cadmium, and zinc.
- -- California Gulch, Leadville, Colorado: A ravine cut by a stream is contaminated by mine drainage. Hazardous substances found include manganese, lead, zinc, copper, cadmium, iron and cobalt.
- -- Tar Creek, Ottawa County, Oklahoma. Water and air contamination from mine drainage. Hazardous substances found include cadmium, lead, zinc, and iron."

FACT:

A. Iron Mountains Mines. The site involved abandoned copper, not zinc, mines that operated from 1877-1962. The principle problem involved acidic mine drainage which has resulted in acidic water in those areas of the stream adjacent to the tailings piles, as well as the deposition of granular ore tailings in the streams. As a result, very sensitive trout and salmon species have been killed. It is noteworthy that substantially larger amounts of iron, as well as some aluminum, are also contained in these piles, and the acidic drainage would render all metallic minerals soluble in such circumstances. In any event, zinc is merely a mineral present in the waste rock along with several others at this abandoned copper mine site.

B. California Gulch. This is an abandoned lead-zinc mine and the principle problem is also acidic mine drainage. Moreover, the stream referred to is essentially an intermittent stream and is not inherently capable of sustaining aquatic populations, if any, of significant size. Finally, there are no known instances of toxic effects on livestock which drink water from the Arkansas river and fish continue to be caught at the confluence of the California Gulch and the Arkansas River.

C. Tar Creek, Oklahoma. This area is an abandoned lead and zinc mining district. The recent report by the Oklahoma State Health Department (released January 9, 1984), included:

- -- There are no adverse health effects, as long as mine water is not consumed;
- -- Properly treated water of the Neosho River, Spring River and Grand Lake is safe to drink;
- -- Fish from the Neosho River and Grand Lake are safe to eat;

-- Air in the mining region is safe to breathe;

-- Current water supplies provided by the Roubideaux ground water formation are safe to drink.

* * * * * * * * *

Production

Statement #7: "Wastewater from pretreatment of zinc ore and ore processing is sent to a tailings pond at the mine site. These waste streams contain lead, zinc, copper, cadmium, antimony and mercury."

FACT: This statement is misleading in its characterization of the water used to transport the remaining ore from which the zinc has been extracted as "waste water" and in conveying an implicit presumption that these metals, if they occur, are in a toxic chemical form. First, tailings consist of the finely ground waste ore, from which the desired metallic mineral has been removed that must be hydrologically transported in a water slurry to a surface impoundment. Second, these metals, if they are present in the slurried waste rock tailings, still remain in their unprocessed natural mineral non-toxic form, although in granular waste rock.

* * * * * * * * *

Statement #8: "Wastes from zinc production contain zinc and other metal oxides, cadmium, lead, cyanide, managanese, zinc, copper, and mercury."

FACT: This statement, which refers to waste streams from the zinc smelting and refining process, is so broad that it lacks any definition. It is misleading because it presumes the toxicity of all these metals, irrespective of the chemical form in which they occur and their relative concentrations. Moreover, in the U.S. there are now only 4 operating zinc smelters, and a fifth has recently announced its intention to reopen after being closed for over 16 months. These smelters' wastestreams are subject to EPA regulations under the Clean Air Act and Clean Water Act, and consequently their emissions and waste water treatment discharges are subject to EPA standards. Moreover, most waste streams which contain substantial quantities of metals are recirculated back to other recovery units in order to avoid loss of these metals' values. The remaining sludges or the larger volumes of "cinder-like" slag contain small amounts of unrecoverable metals and inorganic salts. The relatively low metal concentrations in the slag are not likely to contaminate ground water or the environment because of low solubility. Consequently, the threat to the environment is minimal and no hazard is posed to human health.

* * * * * * * * *

Statement #9: "Wastewaters from scrubbing of gases high in sulfur dioxide contain relatively high concentrations of mercury."

FACT: This statement is both erroneous and also misleading in implicity suggesting that zinc smelter wastewater is discharged without treatment. In this connection, ICF's own report to EPA states:

> "Gases high in sulfur dioxide, from the roasting of zinc concentrates, are 'scrubbed' (sulfur dioxide is removed in a sulfuric acid plant). The scrubbing residue, or sludge, contains almost all the mercury from the zinc concentrate. This sludge may be recycled, but recycling is difficult if the mercury content is high. If it is not recycled, it remains as a byproduct and must be disposed of at a waste disposal site either on or off the mine site."

The mercury is therefore captured in the sulfuric acid (not the water), that is manufactured in the smelter's acid plant, is removed, and then contained for later disposal. Consequently, the containment and disposition of the mercury is a problem to be dealt with at operating smelters, not at abandoned mine sites. To have included this statement as a basis upon which to impose a tax on zinc producers is at best in error and in fact disingenuous.

7

Nickel: Data Citations

FOOD AND DRUG ADMINISTRATION - FINAL RULE, DECEMBER 12, 1983

> "The FDA is affirming that nickel is generally recognized as safe (GRAS) as a direct human food ingredient. ...The Select Committee on GRAS concluded that: "There is no evidence in the available information on elemental nickel that demonstrates, or suggests reasonable grounds to suspect, a hazard to the public when it is used at levels that are now current... or might be expected in the future."

EPA - NATIONAL REVISED PRIMARY DRINKING WATER REGULATIONS (ANPR OCTOBER 5, 1983)

> "The World Health Organization has not established a recommended action level for nickel. The National Academy of Science does not view nickel in drinking water in terms of current levels as a cause for concern. In view of the unusually low concentrations of nickel in drinking water and in view of the limited health effects aspect, the establishment of a limit for nickel in drinking water is not warranted."

NATIONAL ACADEMY OF SCIENCES - DRINKING WATER AND HEALTH, 1977 AND REAFFIRMED, 1980, VOL. III

> "The toxicity of nickel or nickel salts through oral intake is low, ranking with such elements as zinc, chromium and manganese... nickel salts exert their action by gastrointestinal irritation and not by inherent toxicity.
>
> ...the cause of this relative nontoxicity appears to be a mechanism in mammals that limits intestinal absorption of nickel... nickel also has little tendency to accumulate in tissue during lifetime exposure."

WORLD HEALTH ORGANIZATION, TRACE ELEMENTS IN HUMANS. NICKEL. WHO TECH. REP. SER. NO. 532:40, 1973

> "...the range between the required and toxic levels of nickel is extremely wide and WHO is not aware of any cases of human toxicity."

SECTION 311, CLEAN WATER ACT (40 CFR, SEC. 117.3)

Section 311 of the Clean Water Act lists five nickel compounds as "hazardous substances" but does not list nickel metal. The five compounds and their reportable quantities are as follows:

Nickel Ammonium Sulfate	5000 lbs.
Nickel Chloride	5000 lbs.
Nickel Hydroxide	1000 lbs.
Nickel Nitrate	5000 lbs.
Nickel Sulfate	5000 lbs.

Four of the five compounds are in the least harmful class of "hazardous substances" whereby EPA has determined that discharges directly into water do not even have to be reported unless in quantities of 5000 lbs. or greater.

[Prior to 1977, the NRDC sued EPA to regulate certain pollutants and the resulting consent order listed "65 priority pollutants." These pollutants were families of materials, including nickel and compounds, to be addressed for possible control technologies. The 1977 Clean Water Act amendments incorporated the list by reference, (Table I Senate Public Works and Transportation Committee Report 95-30, November 1977--subsequently called the "toxic list") and it was to be regulated under Sec. 307(a), the toxic and pretreatment list for BAT.

Under Sec. 311, EPA was also required to establish reportable quantity levels for "hazardous substances" released into the environment. EPA reviewed the Sec. 307(a) list and established requirements for those compounds actually determined hazardous. Only five compounds of the nickel family were selected, not nickel metal.]

AMBIENT WATER QUALITY CRITERIA FOR NICKEL, EPA, OCTOBER 1980

Human Health Criteria - 13.4 ug/l and 100 ug/l (based on safety factor of 1000 and data from single rat study)
Aquatic Life Criteria - 1,100 ug/l-hardness and concentration levels

"Elemental nickel is seldom found in nature and is not soluble in water as the pure metal, many nickel salts are highly soluble in water." ... nickel compounds soluble in water are nickel hydroxide, nickel monosulfide, nickel oxide, nickel chloride, nickel nitrate, and nickel sulfate."

Because of the variety of forms of nickel that can exist in bodies of water and the various chemical and toxicological properties of these forms, EPA has developed a water quality criterion that is at best stated in terms of total recoverable nickel. EPA states, "the forms of nickel that are commonly found in bodies of water and are not measured by the total recoverable procedure, such as a part of minerals, clays and sand, probably are forms that are less toxic to aquatic life and probably will not be converted to the more toxic forms".

AMENDMENT TO H.R. 5640

PURPOSE: Exclude zinc from list of taxable substances

BACKGROUND:
- 1980 Superfund law correctly exempted zinc from tax and substituted instead zinc chloride and zinc sulfate.
- Zinc exempted in 1980 based on absence of data supporting treatment as hazardous and because of potential for adverse impact on domestic zinc industry.
- H.R. 5640 would unjustifiably tax zinc in lieu of zinc chloride and zinc sulfate.

SUPPORT FOR ZINC EXCLUSION - The basis for taxing zinc is embodied in an EPA document, "Rationale for Taxing Zinc," which is full of inaccuracies and ignores not only its own data but the substantial body of other expert scientific data documenting zinc's relatively benign nature.

- "...zinc is relatively non-toxic and is an essential trace element." (EPA, ANPR, October 5, 1983.)
- "Zinc interacts with other trace metals and has a protective action against toxicity of cadmium and lead..." (EPA, ANPR, October 5, 1983.)
- "...the National Research Council which could not find literature that suggested zinc is mutagenic in animals and human beings... The same conclusions can be made with regard to tetragenesis. The greatest risk is related to zinc deficiency." (EPA, 1980 Ambient Water Quality Criteria for Zinc.)
- "...zinc oxide and zinc sulfate are generally recognized as safe... as direct human food ingredients and...zinc chloride is safe as an indirect food ingredient." (FDA, FR 47441 ff., October 26, 1982.)
- "...extensive studies indicate that feeding zinc oxide or zinc sulfate at levels in excess of 500 mg of the salt per kg has no consistently adverse effect." (FDA, FR47441 ff., October 26, 1982.)
- The Select Committee concluded there was no evidence of carcinogenicity in rat studies involving the feeding of excessive levels of zinc oxide, zinc acetate, zinc carbonate and zinc sulfate. (FDA, FR47441 ff., October 26, 1982.)

EPA's RELIANCE ON INFERIOR DATA - EPA's zinc "Rationale" document is drawn from a November 1983 by ICF, Inc., which surveyed 881 waste sites with the following results.

- ICF found detectable amounts of zinc at 106 sites but states that its study "...omits concentration data."
- ICF maintains its study provides "...insights into the occurrence..." of zinc.
- ICF urges caution in interpreting its study "...because information on sampling procedures, types and locations of samples to drinking water supplies are not available."
- ICF concludes that mere detectable presence of zinc will entail cleanup at "measurable" cost.

July 13, 1984

ZINC AND HUMAN HEALTH

Concern is growing within the medical community that the American diet is deficient in zinc -- a trace element essential to human health. The importance of zinc is highlighted in the attached articles; the table below summarizes the beneficial uses of zinc and problems associated with zinc deficiency.

Zinc Uses as a Health/Treatment Aid

- Atherosclerosis (hardening of the arteries)
- Urinary frequency, irritation, infection, and difficulty
- Prostate irregularities
- Male infertility and impotency
- Cold prevention
- Infection
- General immunity
- Necessary for DNA and RNA functioning and reproduction
- Surgical and wound healing
- Burns
- Sickel cell anemia
- Crohn's disease (a debilitating ailment of the gastrointestinal tract)
- Acrodermatitis enteropathica (AE) -- a rare and often fatal childhood disorder resulting in diarrhea, vomiting, hair loss and severe skin outbreaks
- Body odor
- Canker sores
- Smell and taste perception
- Night blindness among alcohol abusers
- Lead absorbtion
- High cholesterol
- Acne
- Skin ulcers and irritation (calamine lotion is zinc oxide with a small amount of ferric (iron) oxide)
- Infant formula
- Dwarfism/slow growth
- Thymic atrophy

Problems Associated With Zinc Deficiency

- Atherosclerois (hardening of the arteries)
- Prostate irregularities
- General immunal deficiencies
- Multi-generational effects if mother zinc deficient during pregnancy
- Male and female infertility
- Slow fetal growth
- Abnormal fetal development
- Prolonged child birth labor
- Dwarfism
- Cancer of the esophagus
- Delayed wound healing
- Chronic skin ulcers/lesions
- Malnutrition
- Pulmonary infection, including TB
- Uremia
- Anorexia
- Impaired taste and smell
- Pica
- Hypogonadism
- Impotence in renal dialysis patients
- Intention tremor
- Jitteriness
- Diarrhea
- Baldness
- Dermatitis
- Growth Retardation
- Depression
- Night blindness
- Hair and nail problems

STATE OF THE AMERICAN ZINC INDUSTRY

Zinc is a vital material, as evidenced by the Government's current stockpile target of 1,425,000 tons. Its main uses are in galvanizing to protect steel from corrosion, in die castings (where usage has been declining because of their decreased use in automobiles), and in brass. The U.S. has ample reserves of zinc and despite some older and less efficient plants, mining and smelting techology is generally competitive with that of foreign producers.

Since 1969 there has been a severe erosion of this country's competitive position in the world zinc market. Following widespread closures, U.S. zinc production and consumption stabilized for a few years in the early 1970's. U.S. zinc consumption dropped sharply in the 1975 recession, however, and only began to return to pre-recession levels in mid-1983. An excessive flood of zinc metal imports at distressed prices during the 1976-79 period robbed U.S. producers of a chance to fully recover from the 1975 recession. Demand for zinc weakened substantially from 1979 through mid-term 1983, when the automobile industry recovery began to increase demand and zinc consumption increase 12% over depressed 1982 levels. Overall domestic production, however, still fell below 1982 levels.

Below is a brief review of what has happened in the American zinc industry since 1970 .

... In 1970, the United States produced over 1 million tons of zinc metal a year. In 1983, it produced less than one-third that amount, about 295,000 tons.

... Ten U.S. zinc smelters have been closed since 1969. In 1969 this country had 14 zinc smelters; in June 1980 it had six. It now has 4 with a fifth scheduled to reopen after being closed for more than a year.

... A decade ago this country was dependent on foreign sources for 20-25 percent of its zinc metal; in 1983 the U.S. was 70 percent dependent.

... In 1982 and 1983, U.S. zinc average prices were 38.5¢/lb. and 42.0¢/lb., respectively, both of which were depressed years. A recent Stanford Research Institute analysis concluded that less than half ot eh Western World's zinc producers can make a profit at 40¢/lb. In inflation adjusted dollars, these zinc prices were at their lowest level in 15 years and were 3-4¢/lb. lower than in 1977 when U.S. producers collectively suffered a before-tax loss.

... 1984 zinc prices improved, averaging 49-50¢/lb. This recovery is the result of increased automobile demand--a major market for zinc.

July 21, 1984

SUMMARY
NICKEL METAL-REMOVAL FROM SUPERFUND FEEDSTOCK TAX

Nickel metal is used in many universal products such as coins, watches, household stainless steel items as well as prosthetic devices. In its metal form and most common use as an alloy with iron and steel, nickel is not considered a danger to public health.

o HEALTH EFFECTS--Nickel metal is considered relatively nontoxic to man according to EPA, the National Academy of Sciences and the World Health Organization (WHO). Nickel is considered essential to animals and it is Considered an essential element to humans. The FDA has identified nickel as Generally Recognized as Safe (GRAS), and concludes that: no evidence exists that demonstrates "nickel to be a hazard to the public as it is presently or is expected to be used in the future."

The only incidence of nickel related health problems to humans occurred prior to 1930 in non-U.S., heat-intensive refineries where workers were exposed to high concentrations of nickel compounds associated with other metallic compounds. Recent studies of nickel exposed workers have shown no increased incidences of health effects to humans.

o TOXICITY-ENVIRONMENTAL CONTROLS--Like all substances, in certain high concentrations nickel compounds may be toxic but relative to other metals, nickel and its compounds have a low order of toxicity. Neither the WHO, the National Academy of Sciences nor EPA have recommended a drinking water standard for nickel. The daily oral ingestion of nickel in food is much higher than concentrations found in drinking water. As a result of its presence in foods and water,the average adult consumes 300-600 ug of nickel per day.

Nickel compounds, not nickel metal, are listed under Section 311 of the Clean Water Act as "hazardous substances." Almost all of the compounds are in the lowest toxicity release category.

As a metal present in the earth's crust, nickel is widely distributed in nature and therefore, may be detected in the soil at Superfund sites due to natural background levels. No evidence exists that nickel is a problem at Superfund sites.

- PRODUCTION--The Port Nickel, Louisiana refinery is the only pure nickel refinery in the U.S. and is capable of supplying up to 20% of the U.S. supply. Presently, over one-half of the plant's production is exported which means that over 80% of the nickel consumed in the U.S. is imported. (The U.S. consumes over 200 million pounds of nickel per year.)

  In production since 1975, the Port Nickel plant has struggled to remain even marginally economic. Since all metal prices are established on the world market, any additional costs placed on domestic production, such as taxes, cannot be passed through to either the domestic or foreign customer, therefore jeopardizing the facility's ability to compete in the world marketplace.

  No solid waste is disposed of at Port Nickel. Because of the precious metal content, the residue is sold and recycled elsewhere.

- TAX--Current law taxes nickel and H.R. 5640 suggests taxing nickel metal at $14.94 per ton. Clearly, a review of the rationale for taxing this metal is warranted in light of its relatively nonhazardous nature and the unique status of the U.S. only pure nickel refinery.

NICKEL METAL - PROPOSED SUPERFUND FEEDSTOCK TAX

The majority of nickel metal is used in stainless steel and is not considered an environmental or human health problem. Nevertheless, it is subject to the superfund feedstock tax under CERCLA. If the purpose of CERCLA is to tax "building blocks" used to create hazardous wastes, the taxation of nickel metal cannot be justified in light of its relatively nontoxic, nonhazardous nature.

BACKGROUND: During the 1980 Superfund debate Congress considered and exempted certain metals including, copper, lead and zinc from the Superfund taxable list by substituting compounds. Even though the case for nickel is similar to that of the other metals exempted, Congress did not consider nickel and it simply remained on the list of taxable substances. Therefore nickel was not identified as a metal to be specifically studied under Section 301 of CERCLA and a "rationale" paper does not exist to justify its taxation.

In reviewing the EPA "rationale papers" for taxing other metals, however, it can be assumed that because specific nickel compounds are considered hazardous, a broad generalization is made that all nickel, regardless of form or concentration, is hazardous. Such a sweeping generalization should not be made. This paper attempts to show why nickel metal should not be a taxable item under Superfund.

HEALTH EFFECTS OF NICKEL

Nickel is widely distributed in nature in various forms. It is present in sea water and most of our natural vegetation. The average farm soil in the U.S. contains about 30 ppm of nickel and therefore grains, vegetables and fruits, contain nickel. It is an essential element for many animals and it is considered an essential and beneficial element to man. As a result of its presence in both foods and drinking water, it is estimated that the average adult consumes 300 to 600 ug of nickel per day.

The Federal Food and Drug Administration has identified nickel as Generally Recognized As Safe (GRAS), and concludes that: no evidence exists that demonstrates "nickel to be a hazard to the public as it is presently or is expected to be used in the future". The World Health Organization (WHO), and the National Academy of Science consider nickel metal relatively nontoxic to man. Furthermore, neither of these organizations nor EPA has recommended drinking water standards for nickel. The National Academy states that nickel metal occurs in trace amounts and poses no toxicity problem because it is relatively insoluble and absorbtion is low.

Like many other substances, any concern with nickel in the environment is not with its pure metallic form, but may arise from specific chemical compounds that are formed from nickel. The World Health Organization in its report on trace elements noted that the range between the "required" and the toxic levels of certain nickel compounds is extremely wide and states that it is not aware of any cases of human toxicity. Nickel salts, like copper salts, are more soluable and are considered more toxic than their metallic forms. However, even nickel salts require large oral doses to produce toxic effects in animals. Consequently, no evidence exists that nickel or nickel salts administered orally pose a health risk.

Dermatitis can result from skin exposure to nickel metal and nickel compounds. This can occur in the general public to persons sensitive to nickel. It should be noted that the literature reports certain incidences of chronic health effects in nickel refinery workers. Such incidences occurred, however, prior to 1930 in non-U.S. refineries that used a pyrometallurgical, heat-intensive process where high exposure to certain nickel compounds associated with other metallic coupounds such as arsenic, were linked to nasal and lung cancers. Not only are such process and specific compounds not in existence in the U.S., but recent studies of nickel exposed workers indicate that no evidence exists that nickel in the workplace or general environment constitutes any health risk.

ENVIRONMENTAL STANDARDS

Section 311 of the Clean Water Act lists five nickel compounds as "hazardous substances" but does not list nickel metal. The five compounds and their reportable quantities are as follows:

Nickel ammonium sulfate	5000 lbs.
Nickel chloride	5000 lbs.
Nickel hydroxide	1000 lbs.
Nickel nitrate	5000 lbs.
Nickel sulfate	5000 lbs.

Four of the five compounds are in the least harmful class of "hazardous substances" whereby EPA has determined that discharges directly into water do not even have to be reported unless in quantities of 5,000 lbs. or greater.

EPA has also established water quality criteria for nickel but qualified their numbers as representing that "all concentrations are expressed as nickel, not as to the specific compounds tested." Therefore, it is difficult to determine which nickel compounds EPA has determined are of regulatory concern. The EPA has established 13.4 ug/l of nickel as a water quality criteria to protect human health. However, this level has an admitted safety factor of 1000 and is based on a single rat study. Given the fact that the average adult drinks two liters of water per day, the criteria level is still approximately 22 to 45 times less than the amount the average adult ingests per day (300-600 ug/l). In fact, the criteria is equivalent to the amount of nickel inhaled from smoking 40 cigarettes per day.

EVIDENCE AT SUPERFUND SITES

In reviewing the "Analysis of Substances Exempt from CERCLA Tax pursuant to 301(a)(1)(H)" prepared for EPA by ICF, Inc. it is difficult to determine if nickel or nickel compounds have been found to be a problem at any Superfund site.

ICF's review of substances found at 12 of the mining waste sites (Exhibit 2-2) does not show nickel as being present at any mine waste sites. The results of the inorganic sample analysis of soil and water indicated that nickel was "detectable "at numerous sites but did not specify concentration levels, background levels, nor whether nickel compounds posed any contamination problems warranting cleanup. Because nickel is one of the most abundant elements in the earth's crust, it is inevitable that soil and water samples will contain certain levels of nickel. The concentrations and the source of the nickel present must be determined before any alleged "Superfund problems" can be made. There seems to be no evidence to show that nickel in any form has created a Superfund site listing.

Furthermore, the only pure nickel refinery in the country recycles its waste to extract the precious metals. There simply is not a major nickel industry in this country generating wastes that are harmful under Superfund.

CONSUMPTION - USES

Stainless Steel and Metal Alloys	86%
Electroplating	10%
Chemicals and Catalysts	4%

Nickel metal as is evidenced by the U.S. Stockpile target of 200,000 tons is a strategic and critical material in the U.S. economy. The majority of nickel is used in both nonferrous and ferrous alloys and stainless steel, which comprises approximately 86% of the West's consumption. The corrosion resistant nonferrous alloys are critical to certain aerospace military and electronic applications. Stainless steels and superalloys are important elements in making heat resistant processing equipment for refining oil, for controlling stack gases in power plants and as critical components of jet engine parts. While nickel alloy steels are the basis of our industrial and military equipment, stainless steels are also commonly found in many household items such as kitchen flatware, utensils and food processing equipment. Since nickel alloys are corrosion resistant, they are used in seawater applications such as water handling systems and in ships cladding.

Another 10% of nickel metal is used in the electroplating business. Nickel is fed into a processing system where it is deposited and coats the outside of the product. Examples of electroplated products include automobile trim, household toasters and fawcets.

The remaining 4% of nickel is used by the chemical industry in producing nickel salts, which are often used as catalysts for the manufacturing of other chemicals.

U.S. PRODUCTION OF NICKEL

260 million lbs.--1983 U.S. Nickel Consumption
8.6 million lbs.--Nickel Salts (4%) U.S. Consumption
80 million lbs.--1983 AMAX Production
(60% of AMAX Nickel is Exported)

The AMAX Port Nickel Refinery in Louisiana is the only pure nickel refinery in the United States and is capable of supplying up to 20% of the United States' domestic nickel supply. At capacity, it produces around 80 million pounds of nickel per year. Since one-half of this is exported, AMAX has only a small corner of the U.S. market. The refinery has traditionally employed approximately 500 people.

AMAX purchased Port Nickel in 1971 in an effort to facilitate the Company's entry into the nickel business and spent three years rehabilitating the refinery by installing new processing and environmental equipment. Upgrading the plant included adding a new hydrometallurgical process which offers several advantages over the older pyrometallurgical, heat intensive process; it is less energy intensive, can accommodate refining a variety of metals - and generally avoids most of the usual environmental problems. Other new support facilities include a new water treatment system and an energy saving fuel system. Since the refinery residues (wastes) contain precious metals, Port Nickel is selling all of the residues from the plant for the ultimate reclamation of the precious metals. Therefore, no solid waste is discarded at Port Nickel today.

Since production began in 1975, the plant has remained an economically marginal operation. Nickel prices have not improved, but have dropped over the past few years.

The plant is not dependent on a single source of raw material; nickel ore is mined overseas and arrives at Port Nickel from Botswana, Australia and New Caledonia. While there are a few known nickel resources in the U.S. at the present time, they are not economic for mining purposes.

Over 80% of the U.S. consumption of nickel is from foreign sources such as Canada, Australia and Norway.

Like all metals, the price of nickel is established by the world market. Any additional costs cannot be added on to the sales price if a producer is to remain competitive in the world marketplace. Since AMAX sells nickel both domestically (40%) and for foreign consumption (60%), any domestic tax cannot be passed through to the foreign purchaser. Any effort to equalize that tax must take into account both the import and export status of the metal.

July 21, 1984

IMPACT OF SUPERFUND TAXATION ON DOMESTIC Nickel PRODUCTION

The U.S. has only one primary nickel producer in the U.S., AMAX's Port Nickel Refinery in Braithwaite, Louisiana. At capacity, the Refinery produces approximately 80 million pounds of strateguc nickel metal per year.

H.R. 5640, as introduced, proposes to tax nickel metal at $14.94 per ton. While this tax amounts to less than $1 million a year out of a proposed $9 billion to be raised for Superfund. It is an unfair and additional economic burden to place on the sole domestic nickel producer in today's depressed market. The Superfund tax penalizes domestic producers and workers in several ways:

- Almost three quarters of the Western world market is abroad. AMAX sells more than fifty percent of its production overseas, in competition with foreign producers who do not bear this tax burden.

- AMAX Nickel has not attained profitability in its short 10 year history. Nickel prices at approximately $2.20 per pound correspond to prices realized nine years ago, and on a constant dollar basis are at a 15 year low. Even the most efficient producer in the Western World claims $2.50 as the break-even cost but has to sell at lower prices in the face of commodity market pressures from subsidized economies.

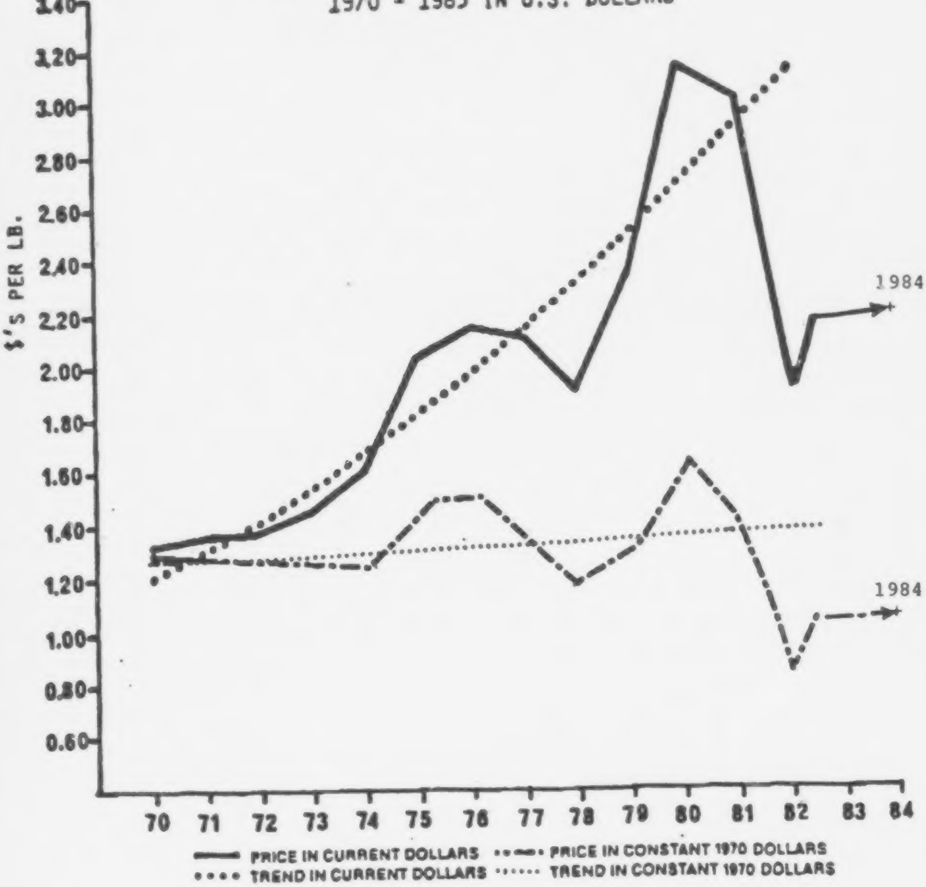
- The livelihood of 450 employees are in jeopardy as is the business spin-off to an economically depressed area of South Louisiana. This proposed Superfund taxation exceeds the payroll cost of 16 of these employees.

The Port Nickel, Louisiana refinery is one of the most efficient nickel refineries in the world, producing non-harmful materials and generating no hazardous wastes from its environmentally clean facilities. Yet, because some nickel compounds may be considered hazardous, nickel metal, in general, is being unfairly taxed, and has been since 1980.

Since Superfund taxation was introduced in late 1980, the nickel business has deteriorated steadily because of economic recession and faltering capital goods demand. The Port Nickel refinery has faced the challenge by aggressive cost cutting and efficiency improvements. Labor productivity was increased by 49%, energy efficiency improved by 25%, the workforce was reduced by almost one-third, summer shutdowns were implemented to conserve costs, savings were pursued in every phase of the operation and capital spending was drastically curtailed. However, capital spending is the key to further efficiency improvement, yet the proposed Superfund taxation, equivalent to about one-third of recent capital allocations, severely impacts the limited resources available. Additionally, a quarter of the capital spending over the past five years was spent on environmental improvements.

In summary, the proposed Superfund taxation (H.R. 5640) threatens the viability of the sole producer of strategically important nickel metal in the U.S. Even though it is one of the most efficient refineries in the world, it is struggling for survival in a depressed market in the face of subsidized foreign competition, increasing local and state taxation, and now, unjustified federal taxation.

AVERAGE GROSS REALIZED NICKEL PRICES
1970 - 1983 IN U.S. DOLLARS



STATEMENT OF ROBERT M. CAMPBELL, MANAGER OF CORPORATE SERVICES, LITHIUM CORP. OF AMERICA, WASHINGTON, DC

Mr. CAMPBELL. Thank you, Mr. Chairman and members of the committee. My name is Bob Campbell. I am manager of corporate services of the Lithium Corp. of America. I am here today because the House bill and possibly the Senate would add lithium carbonate to the list of chemicals to be taxed under Superfund. Simply stated, lithium carbonate does not contribute to the waste dump problem. The EPA did not find lithium carbonate or any other lithium compound in a survey of 881 dumpsites. Lithium carbonate is not a hazardous chemical. In fact, lithium carbonate is taken as a pharmaceutical in the treatment of manic-psychosis syndrome and EPA has not listed it as a hazardous substance under Superfund, the Clean Water Act, or RCRA. To include lithium carbonate on the Superfund tax list is therefore unreasonable and unjust. This tax would adversely affect the domestic industry that has competed successfully in world markets against Russian and Chinese suppliers, and against the supply source sponsored by the Chilean Government. The tax penalty equivalent to $1,000 per employee per year would be a severe disadvantage in this competition. The total revenues raised by taxing lithium carbonate represent less than one-tenth of 1 percent of the total raised by feedstock taxes—they are minimal. Since the impact on this small domestic industry is potentially so adverse and the environmental consequences of lithium carbonate production so insignificant, Congress should not tax lithium carbonate.

Senator SYMMS. Thank you, Mr. Campbell. Mr. Flora.

[Mr. Campbell's prepared written statement follows:]

TESTIMONY OF ROBERT M. CAMPBELL
SENATE COMMITTEE ON FINANCE
SEPTEMBER 21, 1984

Thank you very much for the opportunity to appear here today to present my views on why Congress should continue to exempt lithium carbonate from the feedstock tax under Superfund. My name is Robert Campbell, and I am Manager of Corporate Services for Lithium Corporation of America, one of the two domestic producers of lithium carbonate.

Lithium, although little known, is a versatile and useful element found as a mineral or contained in a brine in many deposits around the world. U.S. suppliers have been highly successful in world markets and currently export nearly 60 percent of their production, thus creating domestic jobs and contributing favorably to the U.S. balance of trade.

Lithium carbonate, extracted from ores and brines, has a variety of end uses. Its principle application is in the production of aluminum to increase electrical efficiency and to reduce fluoride emissions. It is also used in the production of ceramics and glass and as a pharmaceutical. Lithium carbonate when converted into other lithium compounds is used to produce lubricants, air conditioning refrigerants, welding and brazing fluxes, sanitizing compounds, high performance batteries, vitamin A, lithium alloys and polymer catalysts just to name a few of its varied applications.

In reauthorizing Superfund, Congress should continue to exempt lithium carbonate from the feedstock tax for several sound reasons. First, there is no significant hazardous waste disposal and contamination problem associated with the production of lithium carbonate and its derivatives. Second, the economic impact of the proposed tax on the domestic lithium industry would be quite severe. Third, and finally, taxing of lithium carbonate would contribute only minimal funding to the Superfund program. Let me discuss each in turn.

The Adverse Environmental Impact Associated With Lithium Carbonate Production And Its Derivatives Is Inconsequential

It is not clear why the taxation of lithium carbonate has been proposed. Lithium carbonate is not taxed under current law. EPA has not recommended inclusion of lithium carbonate on the list of taxable substances. Lithium carbonate is not a hazardous substance and is not regarded as such by EPA. In fact, the FDA has approved lithium carbonate use for human consumption in the treatment of manic depression psychosis. Lithium carbonate production does not generate hazardous waste. Congress should not tax chemical substances like lithium carbonate merely because a remote derivative may have hazardous properties. This is analogous to taxing table salt, a common name for sodium chloride, merely because sodium chromate and sodium bifluoride are CERCLA designated substances.

Superfund, as passed in 1980, imposed an excise tax on the sale of certain taxable chemicals. The rationale for the fee was explained in the Senate report on the bill as follows: (S. Rep. No. 848, 96th Cong. 2d Sess., pp. 72-73 (1980):

> The fee is assessed on substances which are either hazardous themselves or are the basic building blocks (petrochemicals, inorganic raw materials and petroleum oil) used to make almost all major hazardous substances.

Recently, seven criteria have been proposed for evaluating substances for Superfund taxation (Joint Committee on Taxation, Staff Report "Background and Issues Relating to the Reauthorization of Superfund," 98th Cong., 2d Sess., pp. 40-41 (1984)):

> (1) The raw material, its intermediate or final product, is found at 1 or more of Superfund sites that are candidates for remedial action as indicated in the Hazard Ranking System (HRS) data base, in a Fund-financed removal action, or in an enforcement action; (2) hazardous wastes generated in making the raw material or a number of its intermediate or final products are found at 2 or more of the HRS sites, in a Fund-financed removal action, or in an enforcement action site; (3) the raw material itself is a designated hazardous substance pursuant to CERCLA; (4) hazardous wastes are generated

> in making the raw material its intermediate or final products; (5) the raw material is hazardous in a number of forms (e.g., as a raw material, an intermediate or final product); (6) the raw material is capable, in one or more forms, of increasing the hazard potential of other substances; (7) the raw material is hazardous, in some form (e.g., gas, liquid, solid), if released (e.g., spilled).

Tested by the environmental criteria spelled out above, Congress should continue to exclude lithium carbonate from the Superfund list of taxable substances.

Criterion 1. Lithium carbonate has not been found in its raw, intermediate or final product form at Superfund sites. Information supplied to Lithium Corporation by the EPA shows that tritium, a derivative of lithium carbonate, was found at one of the 881 sites investigated by EPA. Tritium, a radioactive isotope of hydrogen, is not a final product of lithium carbonate but a remote derivative, produced by the U.S. sponsored nuclear industry in gram quantities from lithium-6 isotope. In addition, tritium is one of the least hazardous radionuclides because it has a relatively short biological half-life and low disintegration energy. The quantity of lithium carbonate used to produce the lithium-6 isotope which in turn is used to produce tritium represents a miniscule portion of total U.S. production. Thus, the identification of tritium at one site investigated by EPA would not support taxation of lithium carbonate.

Criterion 2. Production of lithium carbonate and its intermediate and final products does not generate hazardous wastes found at Superfund sites identified or evaluated by EPA. No hazardous wastes linked to lithium carbonate production have been found at National Priority List sites.

Criteria 3, 5. Lithium carbonate in its raw, intermediate or final criteria product form is not a hazardous substance under CERCLA. EPA has not listed lithium carbonate as a hazardous substance under CERCLA or the Clean Water Act and it is not a hazardous substance according to the lists established by EPA under RCRA. Environmentally, lithium carbonate is relatively benign and generally recognized as having a low degree of toxicity. One and only one lithium carbonate derivative -- lithium chromate -- is a CERCLA designated hazardous substance. But, lithium chromate's CERCLA designation is based on its chromate, not lithium content. This is apparent from review of EPA data supporting this designation, which specifically refer to data for sodium chromate toxicity. Chromium and chromite are, of course, already taxed under the current statute.

Criterion 4. Production of lithium carbonate and its intermediate and final products generates insignificant volumes of hazardous waste. The primary factor giving rise to the decision to tax certain substances was the generation of hazardous wastes during their manufacture because these wastes are causes of contamination at the sites the Superfund program must address. (H. Rep. No. 890, 98th Cong., 2d Sess., p. 75 (1984)). Lithium carbonate production does not itself generate hazardous wastes and any hazardous wastes generated during use of lithium carbonate in subsequent applications are trivial.

Criterion 6. Lithium carbonate does not increase the hazard potential of other substances.

Criterion 7. Lithium carbonate is not a hazardous substance as defined by Superfund.

The Economic Impact Of The Proposed Tax On The Domestic Lithium Industry Would Be Quite Severe.

A feedstock tax on lithium carbonate would adversely affect the international competitiveness of the domestic lithium industry. At the present time, the United States represents the dominant supplier of the world's lithium chemicals. However, the industry faces strong competition from the Soviet Union, Chile and the Peoples Republic of China. The proposed tax under the House-passed bill represents the equivalent of $1,000 per employee per year, which would have an impact on the U.S. industry's international competitive position. In these circumstances, the impact of the tax on the domestic industry could be seriously adverse.

Third, lithium carbonate taxation would contribute minimal funding to the Superfund program.

The total revenues raised by taxing lithium carbonate represent less than 0.1 percent of the total raised by feedstock taxes. Because the funds raised by the tax are so minimal, the impact on this small domestic industry potentially so adverse, and the environmental consequences of lithium carbonate production so insignificant, Congress should not tax lithium carbonate.

STATEMENT OF A.R. FLORA, VICE PRESIDENT, EASTERN REGION OF SHELL REFINING & MARKETING CO., HOUSTON, TX

Mr. Flora. Thank you, Mr. Chairman. My name is Al Flora, and I am vice president of the eastern region of Shell Refining & Marketing Co., which is a division of Shell Oil Co. As a major contributor to Superfund, we welcome the opportunity to speak on this important piece of legislation. We would like to stress three points. First, Shell favors CERCLA reauthorization, but since this law does not expire until September 30, 1985, we believe reauthorization should not take place until all the reports that are required by CERCLA are completed, made public, and reviewed, and analyzed by those concerned. We think this could lead to intelligent funding-level decisions. Second, CERCLA authorization should focus on the purpose of the original law—the cleanup of hazardous wastesites. Now that the cleanup is beginning to work, it should not be diluted to serve other purposes. Finally, the refining and petrochemical industry simply cannot afford an increase in feedstock taxes. If additional funds are proven to be necessary by the required studies, funds should come from a waste-end tax to broaden participation and reward those who minimize waste disposal. We believe a waste-end tax is workable and enforceable. In addition, general revenues and moneys gained through recovery from responsible parties should be part of the funding package. Thank you.

Senator Symms. Thank you very much.

[Mr. Flora's prepared written statement follows:]

STATEMENT OF

A.R. FLORA

VICE PRESIDENT, EASTERN REGION

SHELL REFINING AND MARKETING COMPANY

BEFORE THE

COMMITTEE ON FINANCE

UNITED STATES SENATE

ON

CERCLA REAUTHORIZATION

SEPTEMBER 21, 1984

SUMMARY OF PRINCIPAL POINTS

Shell Oil Company's views on the tax issues raised by legislative proposals to reauthorize CERCLA are as follows:

- Shell is a major corporate contributor to the CERCLA Trust Fund simply because of our production of essential chemicals and refining activities. Consequently, we are interested that the reauthorized CERCLA contains provisions which are fair and equitable.

- Shell continues to support reauthorization of CERCLA and recognizes that an increase in funding may be necessary to carry out the mission of CERCLA, that of waste site clean-up.

- The EPA is required by Section 301(a)(1)(C) of the current CERCLA to define their needs beyond the September 30, 1985, cut off date. This information, not yet available, will be critical in the design of the financial package.

- Congress should reauthorize CERCLA after determining what the EPA's realistic annual funding needs will be, and provide for such levels. The required funds should come from a broadly based tax mechanism rather than the narrow tax structure of the current law--which places a disproportionate burden on the refining and petrochemical industries.

- A waste-end tax approach appears logical since it would broaden the base, relate more directly to the waste site problem and would provide a strong incentive to minimize waste disposal.

Mr. Chairman, my name is Al Flora, and I'm Vice President of the Eastern Region of Shell Refining and Marketing Company, a division of Shell Oil Company. I would like to take this opportunity to express Shell's views on a matter of extreme importance to us all, the tax issues raised by the CERCLA reauthorization.

We thank you for your continued interest in seeing that CERCLA is reauthorized in a fair, efficient and sensible manner. Shell is a major contributor to the Trust Fund because of our position as a large petrochemical feedstock manufacturer and petroleum refiner. We are, therefore, particularly interested in seeing that Congress develop a rational and productive CERCLA reauthorization which fairly distributes the cost of the program across as broad a tax base as possible. You've heard from others who are concerned with the funding of CERCLA, but we may have more at stake than others simply because of our chemical feedstock products and refining activities.

We support reauthorization of CERCLA to a new sunset date and recognize that an increase in funding may be necessary to get the waste site cleanup job done. However, we are concerned over how much money the EPA can effectively spend in an aggressive program and how such funds might be raised. We believe that these concerns and others should be thoroughly reviewed before final passage of new CERCLA legislation. There is still adequate time to examine the facts and to develop a workable funding provision before September 30, 1985, the date the Act expires.

The high funding levels proposed are far in excess of what we feel are needed for a strong waste site clean-up program. We wish to emphasize that the EPA is required by Section 301(a)(1)(C) of the current CERCLA to define their needs beyond the September 30, 1985 cutoff date. This information, not yet available, will be critical in the design of the financial package. We also understand that The Office of Technology Assessment (OTA) has completed a study that sheds further light on the EPA's ability to effectively manage a major expansion of the waste site clean-up program.

We feel that the narrow funding base of the CERCLA "feedstock" tax places a disproportionate burden on the oil and petrochemical industries. To dramatically increase these taxes would serve only to further increase the inequity of this taxing program. For example, ethylene and propylene are volatile reactive materials used to manufacture inert polymers having a multitude of beneficial uses. Neither ethylene nor propylene are regarded as conspicuously toxic materials yet both are heavily taxed under the current CERCLA and those rates are increased substantially by some of the proposed legislation. Indeed, it is unfair that a small handful of organic building-blocks, generally non-toxic chemicals used to make films, fibers and plastics, currently are and would continue to be mandated to provide the bulk of the increased taxes. The present CERCLA tax system taxes current production to pay for past waste disposal actions.

EPA has estimated that petroleum refineries generate less than 5 percent of the hazardous waste in the nation while, according to IRS statistics, petroleum products account for 15 percent of the present taxes raised under CERCLA. The proposed increase in the petroleum tax would add to, not reduce, this imbalance.

If increased funding beyond that which is provided by the current "feedstock" tax proves necessary, other funding methods must be used. A waste-end tax approach would broaden the narrow base, relate more directly to the waste site problem and would provide a strong incentive to minimize waste disposal. We recognize that it will take time to craft an appropriate waste end tax; however, since we view such a tax as a necessary part of CERCLA, it is an important reason to take the time to develop a workable approach that can be put into operation on October 1, 1985. If funds are required beyond what a waste-end tax can add, Congress must look toward general revenues, interest on accrued moneys and cost recovery from enforcement actions.

The CERCLA law enacted by Congress in 1980 is currently in place and EPA has an implementation program which is working. There is ample time before the Act expires for Congress to develop and enact a rational and productive CERCLA reauthorization bill that will focus on the important task of waste site cleanup.

I urge you to consider these points during your deliberations on this issue and, if they cannot be satisfactorily addressed in the remaining time available in this Congress, resist a rush to legislation that is neither fair nor effective.

Senator SYMMS. Senator Bradley.

Senator BRADLEY. Yes; I would like to ask Mr. Fitzgerald, do you support taxing the lead content of gasoline?

Mr. FITZGERALD. Taxing the lead content of gasoline? No.

Senator BRADLEY. Pardon?

Mr. FITZGERALD. No.

Senator BRADLEY. Do you support taxing lead as one of the feedstock chemicals here?

Mr. FITZGERALD. No, we do not.

Senator BRADLEY. Do you believe that lead has any adverse affects on health?

Mr. FITZGERALD. Senator, I am not a scientist. I really have no opinion on that.

Senator BRADLEY. For the record, the EPA has done a number of studies pointing to the decline in intelligence levels of children because of exposure to lead and leaded gasoline. The record is clear there. Do you know what your effective tax rate was last year for the lead industry?

Mr. FITZGERALD. To the lead industry? Just the lead industry itself, no, I do not.

Are you talking about my company in particular or just the industry?

Senator BRADLEY. That is fine. Just tell me what the effective tax rate was for your company.

Mr. FITZGERALD. We paid—and I don't have the effective rate. The corporation, and we are a subsidiary, the overall corporate group paid last year $20 million in U.S. corporate income taxes to the U.S. Treasury.

Senator BRADLEY. And what was your income?

Mr. FITZGERALD. I don't have that figure available, Senator.

Senator BRADLEY. All right.

Mr. CARLSTROM. If I may respond also to your questions regarding lead, we don't support——

Senator BRADLEY. I'm sorry. Who are you?

Mr. CARLSTROM. I am Bob Carlstrom. I am manager of legislative affairs for St. Joe Minerals Corp. and based in the Washington office here. We are proposing in lieu of a feedstock tax, a new concept of taxation that we think is much more simplified—one that would be a tax on corporate income taxes paid. We don't think it is a wise approach as a matter of public policy to select some products and exempt others from a very selective and discriminatory taxation approach. We do recognize that there are health problems associated with lead. We are very much aware of what is occurring with respect to taking the lead out of gasoline. For our purposes, that is about 3 percent of our product that goes there. We do, however, recognize that lead has a bad reputation. It can be a bad actor in certain chemical forms, and we do recognize that. We did earlier on——

Senator BRADLEY. What is the surtax that you are recommending? How much? What percent?

Mr. CARLSTROM. That is really a function of the revenue needs, I think, which this committee determines is appropriate to finance the fund. The rate on percent would be based on the corporate income tax receipts that are anticipated.

Senator **Bradley**. Let's take the 10 percent surtax idea. It was suggested. OK? That 10 percent on you would mean that you would pay $2 million more in taxes? Is that the idea?

Mr. **Fitzgerald**. Correct. The rate would be applicable to our U.S. liability after credits.

Senator **Bradley**. So, the companies that are paying taxes as opposed to avoiding taxes, the effective tax rate in mining is 12 percent here—and we had an industry in here just a few minutes ago with an effective tax rate admitted by the industry of 1 percent—a surtax on them will amount to nothing. You will leave the rest of the people who have nothing to do with toxic wastes and who do not produce an element that is a threat to public health paying the tax. Again, every group comes in here and says we don't want to pay the tax. There are three choices here. We are going to put it on feedstocks. You don't want it on feedstocks, even though your product is detrimental to health. You don't want to have it taxed at the waste-end—you don't want general revenues. You want other people out there who have nothing to do with polluting the environment to pay for it. To me that is not a rational way to go, and it is certainly not a way that helps the committee's deliberation. This is particularly so in lead because if you look at this—and I remember the battle back in 1980—lead was in there, but somehow by the end it dropped out. I can assure you this time that it should be in that list.

Mr. **Carlstrom**. We respectfully disagree.

Senator **Danforth**. Mr. Chairman, may I ask what the intention of the Chair is? We have a rollcall vote.

Senator **Symms**. The intention of the Chair was to complete the hearing prior to the rollcall, but I would yield to the wishes of the Senators that are here. If some of them wish to come back and ask some questions, we can go over and vote and come back.

Senator **Danforth**. I would like to ask a question if I could.

Senator **Chafee**. Why don't you go ahead?

Senator **Symms**. I think Senator Roth has a question, too.

Senator **Danforth**. Should we come back then?

Senator **Symms**. How long do you think you will need?

Senator **Danforth**. Just 5 or 10 minutes.

Senator **Symms**. Maybe we should come back then. We stand recessed. We will reconvene in about 5 minutes.

[Whereupon, at 11:56 a.m., the hearing was recessed.]

AFTER RECESS

Senator **Roth**. The committee will please come to order. I will proceed with my line of questioning, and then I think Senator Danforth is also returning. Mr. Appleby I want to welcome you, as well as the other witnesses here. I am a supporter of reauthorization in trying to meet the needs of EPA as they have detailed them. But I also think it is critically important that in determining the tax that we do so in such a manner as not to unduly impact upon the industry or jobs. I must confess that I think that part of the tax obviously should be borne by those most responsible for creating the problem. At the same time, I am concerned that in the broad sweep of some of the proposals that this is not the case. We shall be taxing those that are not adding to the waste problem. I would like to ask some questions of Mr. Appleby with respect to his testimony. Now, Mr. Appleby, I understand from your testimony that under the terms of the House proposal that the additional tax on the feedstock propylene would increase from roughly $3 million to $12 million a year. This is in excess of what has been earned on this product in any particular year. Is that correct?

Mr. APPLEBY. Yes, sir. In excess of what we have ever earned in the United States.

Senator ROTH. Why can't you pass that off in sales?

Mr. APPLEBY. Polypropylene is a world commodity-type product. Its pricing structure is truly a function of worldwide supply and demand forces. Costs are obviously very important to us. They are a critical element of profitability, but the cost of the product itself is pretty much fixed and determined by market forces. And our experience has simply been that, since the creation of Superfund, there has been no opportunity whatsoever for us to raise our prices by a commensurate amount. In fact, our prices are lower today than they were when Superfund was passed.

Senator ROTH. Is the supply of polypropylene in surplus, or what is the current status?

Mr. APPLEBY. I would certainly think it is fair to say that there is an adequate supply of polypropylene. We are concerned about how close we might be to a situation of oversupply. Yes, sir.

Senator ROTH. How many people are employed in the U.S. industry?

Mr. APPLEBY. In Himont, we have probably 1,300 people throughout the United States. They are heavily concentrated in Louisiana, Texas, and Delaware. Worldwide, we employ in the neighborhood of 4,300 people.

Senator ROTH. What is polypropylene used for?

Mr. APPLEBY. It is a very flexible plastic product, Senator. It is used in a tremendous variety of products. Some of our better end uses are things such as milk cartons, all kinds of plastic wrap for food products, candy bars. In different formualtions, it is also used very extensively in the automotive industry. It has certain properties—it is light in weight, and it is being used more and more these days where the automobile industry is trying to reduce the weight of their automobiles to increase gas mileage. It is used extensively in all types of upholstery products, carpeting, for example.

Senator ROTH. You say in your testimony that polypropylene is nontoxic and noncontaminating. Are there any that disagree with that evaluation?

Mr. APPLEBY. Not to my knowledge. No, sir.

Senator ROTH. You suggest that the committee give consideration to a tiered tax—or sliding tax scale—based on the ultimate end use of a feedstock. Why would that be more equitable?

Mr. APPLEBY. We think this would be a way in which the tax base itself could be expanded. The thought that we had was perhaps the feedstock tax could be tiered into primary and secondary categories. In our case, for example, propylene, which is currently taxed under Superfund, would be a primary feedstock. We make polypropylene out of it, which would be a secondary category. The other facet of that proposal would be to have an assessment of the degree of hazard, and in our case, of course, we would think that polypropylene being nonhazardous should pay a lower tax rate than some other material that is also made from propylene, for example. There are many other materials that are made from propylene that do have characteristics that would be more hazardous than polypropylene. We think that the taxing mechanism could reflect those types of recognized differences.

Senator ROTH. Thank you, Mr. Appleby. Senator Danforth?

Senator DANFORTH. Mr. Chairman, thank you very much. I would like to ask some questions which I am sure will display to the world my lack of sophistication in this area, but not too many people are here, so I am going to do it anyhow. [Laughter.]

It seems to me that there are two results, two objects of tax policy—of decisions on tax policy. One is to raise money, and the other is to have an effect on what people do. And the reason we have such a fat Internal Revenue Code is that frankly we want to have an effect on what people do. Now, for raising revenue, there are all kinds of ways we can do it, and there have been a number of ways that have been suggested by this panel. In addition to a feedstock tax, we could have a waste-end tax. We could have a surcharge on the income tax. We could take the money out of general revenues—if all we were thinking about is getting money to dispose of or to clean up the toxic waste sites. I just want to call your attention to the question of behavior, and how behavioral changes fit into this. I take it that—I am sorry Senator Bradley isn't here because I am sure he could set me straight on it but I take it that his position is that lead is bad, and therefore it should be taxed. And I guess the theory is that in taxing lead we are doing one of two things. We are either punishing bad people for producing lead, or in the alternative, or in addition to that, we are somehow reducing the production of lead. So, I guess the purpose of the feedstock tax in addition to raising revenue is to try to provide an economic incentive against producing whatever these feedstocks are.

So, we are saying—Congress would be saying—as a matter of policy that we think that less lead should be produced, less copper should be produced, less zinc should be produced, and so on and so forth. Am I right in that analysis, that that is implicit in a feedstock tax—the providing of an economic disincentive against production? At least, domestic production?

Mr. CARLSTROM. Yes, sir, if I may respond to that. We believe that is true. The notion behind the feedstock tax, I think, is let's make the polluter pay. Let's try to establish some nexus between that particular product and the problems that we discover at the Superfund sites. As we heard earlier today, we are finding a whole host of materials at sites. We have thousands of sites apparently that EPA has yet to look at and determine what is there. The feedstock tax suggests that we start out with this small group here because ultimately they produce a chemical that winds up there.

Senator DANFORTH. Are you saying in other words, that it is not the disposition that we want to penalize but——

Mr. CARLSTROM. It is the production.

Senator DANFORTH. This is predisposition we are talking about.

Mr. CARLSTROM. That is correct.

Senator **Danforth**. Not the disposition that we want to penalize—it is the production of the product which is being disposed of.

Mr. **Carlstrom**. We think that is a perverse result from the feedstock tax. Products are sold, they are used, and they are disposed of, and they are passed through a very long chain in commerce. Producers really have no control over ultimately what happens to that product. I think a feedstock tax notion is one that suggests that you have strict liability for every product you put in the marketplace. In fact, it makes you liable for perhaps what was yesterday's solution to dealing with waste, which is now today's problem. It overlooks the fact that you are highly regulated, under the Clean Air Act, Clean Water Act, Safe Drinking Water Act, and under RCRA, at either the Federal or State level. Those are major costs that are associated and are intended to minimize waste.

Senator **Danforth**. You have all followed what Congress has done in the past. Has there been an established policy of Congress in the past that we want less of these feedstocks produced in the first place?

Mr. **Carlstrom**. Not that I am aware, and I really question whether or not it is appropriate use of taxing authority to tax what are legitimate products out of existence or out of the country in terms of production. I am not aware of it. Perhaps you can——

Mr. **Fitzgerald**. No; I am not aware of it either.

Senator **Danforth**. Let me ask you about the effectiveness on international trade—something I happen to be interested in. I take it a tax on feedstocks works its way out to be an excise tax on domestic manufacturing. I mean, it would be kind of the flip side of a value-added tax. A value-added tax is designed to provide incentives for Americans to produce things. The feedstock would be to say that American manufacturers of anything that uses lead or copper or petrochemicals or whatever is going to pay a higher price. Therefore, the cost of domestic manufacture is going to be higher. The cost of manufacturing the exact same product—a battery, whatever it is—motor, whatever it is going to be—abroad is going to be less. And therefore, the feedstock tax is a way of saying that the relative cost of producing a whole range of virtually everything that is produced in this country is going to be higher if it is produced in the United States than it is abroad because if it is produced abroad and then exported into the United States there will be no tax.

Mr. **Carlstrom**. That is correct.

Senator **Danforth**. The same product would eventually have to be disposed of so it would be creating the same problems of disposition in this country, but we want it produced abroad because we are going to increase the cost of doing business for the manufacturers in the United States who use these products.

Mr. **Carlstrom**. Exactly. It has been argued by some, including the proponents of the bill on the House side, that these costs normally pass through, but when you are in a highly competitive industry such as the metals industry, where you do not have market dominance, the feedstock tax then becomes a part of the negotiated price of the product. When competition is keen, when the price of the commodity is low, the net result is if you want to maintain your market, that you have to absorb much, much larger portions of the tax.

Senator **Danforth**. Is lead produced elsewhere in the world?

Mr. **Fitzgerald**. Yes. We produce lead in South America, as a matter of fact.

Senator **Danforth**. Why wouldn't all that be done in South America and not in Missouri if we had a feedstock tax? I mean, why couldn't we just say to people who wanted to make batteries or whatever they wanted to make: Get your lead elsewhere. Don't get it in the United States. We have a tax on it.

Mr. **Carlstrom**. I think you would probably see an exporting of the battery-manufacturing industry, and those industries which consume the lead metal produced from our mines.

Senator **Danforth**. The same would be true of copper; right?

Mr. **Carlstrom**. Whether or not you would export it? I can't speak to the copper situation, but I think clearly there is an incentive, and the earlier witnesses did suggest that you would export the fabricators industry as well.

Senator **Danforth**. We have been talking in the Congress about natural resource subsidies and the disadvantage that Americans have in international trade because of subsidized natural resource productions in other countries, which in turn becomes components of whatever they're manufacturing, which competes with what we make. Wouldn't this feedstock tax exacerbate that situation?

Mr. **Campbell**. Could I answer your question, Senator? Speaking from the lithium industry, one of our points is that it can crucify our industry because we do export about 60 percent of our products offshore. It is a great source of jobs for Americans. We contribute to the balance of payments. But we do compete against the sources of supply controlled by the Russian Government and the Chinese Government and also by the Chilean Government. And they don't pay Superfund taxes over there. They don't price their product accordingly. So, at least 60 percent of our product, we would have to eat the Superfund tax.

Senator **Danforth**. Why is a waste-end tax a good idea? It seems to me a waste-end tax, as I understand it, says that if you are disposing of something lawfully, we are going to tax you for doing what is lawful.

Ms. **Caples**. Mr. Chairman, I might respond to that. I think with respect to the mining industry—certainly my company—we don't believe that a waste-end tax relative to the mining industry is, appropriate. As I said earlier, we have no control over the amount of just waste that is generated from the processing of minerals, and I think it is inherent in a waste-end tax that there is some incentive to try to generate less waste, but that just does not work with mining wastes. With respect to the international trade situation, the tax is an additional cost for us that foreign producers do not have, and we can't pass that cost through.

Senator **Danforth**. That would be the feedstock tax?

Ms. **Caples**. It would be on both. Waste-end and feedstock taxes are additional costs that we have to absorb. Our foreign competitors do not have to incur those costs.

Senator **Danforth**. Maybe the object that we are supposed to be pursuing here is that lead and copper and so on should not be used, and I have not heard that case made. I have not heard the case made that all of these various minerals are something that just shouldn't be used at all, or they should be used in less amounts. I thought we were talking about disposition. I thought we were talking about cleaning up sites, not whether you were using too much. If we are using too much, it would be a good idea to raise taxes because we want to discourage use, provided that we were raising taxes wherever it is manufactured, not just domestic manufacture. I don't think we have decided that as a matter of policy.

Mr. **Carlstrom**. No. We would never suggest those types of reductions, sir.

Senator **Danforth**. I wouldn't think so.

Mr. **Campbell**. Senator, could I add a comment, too? Our point is that any tax—whether it is a waste-end tax or a feedstock tax—has to be based on some equitable assignment of responsibility, and in our example—I think it is a good example—you know we are not contributing to the problem, yet we are being proposed to be taxed. And that doesn't make sense to me. And to me that is unfair and unreasonable.

Senator **Danforth**. Thank you all very much. I appreciate your patience in waiting—particularly through the break when we went over to vote. That concludes the hearing.

(Whereupon, at 12:31 p.m., the hearing was adjourned.)

[By direction of the chairman the following communications were made a part of the hearing record:]

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Written Statement of the

AMERICAN MINING CONGRESS

before the

UNITED STATES SENATE
COMMITTEE ON FINANCE

September 21, 1984
Hearing on

REAUTHORIZATION OF THE
COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION AND LIABILITY ACT OF 1980

Submitted September 28, 1984

The American Mining Congress (AMC) is pleased to offer this written statement on the reauthorization of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA or Superfund). Our statement focuses on a limited number of funding issues as they relate to the American mining and mineral processing industry.

AMC is an industry association that encompasses (1) producers of most of America's metals, coal, and industrial and agricultural minerals; (2) manufacturers of mining and mineral processing machinery, equipment and supplies, and (3) engineering and consulting firms and financial institutions that serve the mining industry. AMC appreciates the opportunity to share with the committee some of our industry's concerns regarding the reauthorization of Superfund.

The mining industry will continue to work with Congress and the Administration to develop an effective means of addressing problems that have arisen out of past mining activity.

We also want to assure the members of this committee that the mining industry can and does recognize the realities and the pressures that argue for CERCLA reauthorization. It would appear that many more sites will eventually be listed on the National Priorities List (NPL), and that other sites will require emergency cleanup or removal actions. The pressures are compounded by an apparent inadequacy of the current CERCLA funding mechanism to supply monies needed for all sites now on the NPL as well as future site requirements.

Our industry supports the concept of hazardous waste cleanup and reasonable reauthorization of CERCLA. We believe, however, that current legislative activities on Superfund reauthorization have shortcomings that need to be addressed. We oppose H.R. 5640 and believe it would be impractical to try to amend that bill so as to make it acceptable. S. 2892 has a number of provisions that make it more equitable than H.R. 5640. A number of our concerns with CERCLA reauthorization focus on such issues as mandatory joint and several liability, unreasonable and irrelevant cleanup standards, an overly broad insurance/compensation scheme and unwarranted uses of the fund. The funding aspects of CERCLA reauthorization, however, are no less critical, especially to an industry such as ours that has not yet recovered from the recent, devastating recession and that continues to struggle in the face of world overproduction and surging imports. The committee need only refer to the testimony of J. Burgess Winter for Kennecott (September 21, 1984; pages 1-2 on copper industry status) and Katherine Caples for AMAX Inc. (September 21, 1984; pages 3-5 on nickel and zinc industry status) for examples of the dire straits of the mining and mineral processing industry.

The nature, volume and toxicity of mining and mineral processing wastes differ significantly from wastes generated by other industries. These factors, as well as others, create special problems and consequences for addressing abandoned mine sites and mining wastes under CERCLA. These differences need to be taken into account in any legislation to amend CERCLA. To do otherwise could result in serious, inequitable impacts on a domestic minerals industry already faced with economic problems of major proportions.

Size of the Fund

AMC is not in a position to recommend a specific funding total for the Hazardous Substances Response Trust Fund. Nevertheless, we note that the leadership of the Environmental Protection Agency (EPA) has expressed concern over the agency's ability to properly manage sudden, major increases in the amount of money available for Superfund purposes. We suggest, therefore, that any increases in the level of funding should be incremental, consistent with estimates of short-term cleanup needs and with the government's ability to maintain a reasonable balance between funds collected and those spent.

Expanded Feedstock Taxes

AMC wishes to note that there have been expressions of concern in the past that the mining industry has not paid its "fair share" of Superfund taxes. Some parties have even been under the mistaken impression that the mining industry has paid no taxes. The fact is that the mining industry has, since April 1, 1981, paid Superfund taxes. Our industry's contributions, by our own unofficial calculations, appear proportional to the number of mining-related sites on the NPL--about four percent. The current proposals, notably H.R. 5640, could raise the industry's tax burden to approximately one billion dollars over a five-year term, or 10 percent of a $10.2 billion Superfund. [See Appendix I, a "spread sheet" that provides an approximation of the revenues to be derived from H.R. 5640's feedstock taxes on the mining and mineral processing industry.]

There is no relationship between such a tax burden and the alleged problems involving our industry's sites. Indeed there are good reasons to believe that, whatever problems may be associated with our industry's past or current operations, the industry's contribution to alleged Superfund "problems" has been significantly exaggerated by the bias against mining-related sites inherent in EPA's hazard ranking system (also known as the "Mitre Model").

The Senate Environment and Public Works Committee recognized the bias of the hazard ranking system against mining sites when it stated in its report, "Superfund Amendments of 1984":

> In particular, the validity of the present hazard ranking system has been questioned for identifying the degree of hazard or risk posed by mining sites. The hazard ranking system appeared to identify the most hazardous constitutent at a site, quantify the total amount of wastes at the site, and then assume that all of the waste is comprised of the most hazardous constituent. This could introduce a bias in the hazard ranking system against large quantities of waste with the presence of trace toxic metals, such as typical mining wastes. [S. Rept. 98-631 at p. 27.]

This conclusion is fully supported by a study on the application of the Mitre Model to mining sites done for AMC by TRC Environmental Consultants, Inc. (included with these comments as Appendix II).

An amendment offered by Senators Baucus and Domenici, and unanimously approved by the Environment and Public Works Committee, offers the hope that future injustices in mine site listings can be avoided. That amendment requires the President to promulgate amendments to the hazard ranking system within one year of the enactment of S. 2892. The changes in the hazard ranking system are to

> assure. . .that the hazard ranking system accurately assesses the relative degree of risks to human health and the environment posed by sites and facilities subject to review. [S. 2892, proposed §111.]

It has also been argued that metals should bear a greater share of CERCLA taxes because metals have been detected in a large number of NPL sites. This argument, too, is fallacious. Metals are naturally-occurring elements of the earth's crust. They are present also in many industrial wastes unrelated to the mining industry, for example, in oil refinery wastes (metals of course are present in crude oil as it flows from the ground). This is not to suggest that all appearances of metals and metal-bearing wastes at CERCLA sites are unrelated to our industry's operations; we do suggest, however, that the large number of sites at which metals have been found is not a fair measure of this industry's responsibility.

In considering whether and how to expand feedstock taxes, it also is necessary to keep in mind the economic circumstances of America's metals and minerals industry. The industry competes in a world market, in which American producers cannot pass on to their purchasers the added burden of government-mandated costs.

Domestic prices are largely determined by the highly competitive international market, not by domestic producers. For this reason, Congress saw fit in 1980 to exempt some metals, including copper, lead and zinc, from the feedstock tax. Congress instead called for a study of the need for, and effect of, taxing such commodities. That study is nearing completion and we urge Congress at the very least to refrain from imposing taxes on these commodities until it has time to consider these studies.

Waste-End Tax

"Waste-end" tax provisions are of special concern to the mining industry. The industry necessarily produces enormous volumes of relatively innocuous waste. This is due to the nature of the ores mined and the technologies universally employed in mining, milling and processing.

Waste-end tax provisions in earlier versions of H.R. 5640 and the Senate staff drafts correctly exempted mining and mineral processing wastes from any waste-end tax at least until EPA concluded a study of those wastes (under Section 8002(f) and (p) of the Solid Waste Disposal Act) and Congress enacted separate legislation imposing such a tax on the industry. We supported those provisions and we urge the Senate Finance Committee, should it decide in favor of a waste-end tax, to similarly exclude mine wastes.

In the debate leading to the passage of CERCLA in 1980, Congress emphasized the need for cleaning up the problems associated with chemical waste disposal. Congress did not conclude that conventional mining and mineral processing wastes posed an equivalent potential danger to public health. In fact, Congress recognized the need for special consideration for such wastes.

There are many significant differences between wastes from mining and mineral processing operations and those of other industries, including the volumes of wastes generated, their stability and their degree of toxicity to life forms.

Mining and mineral processing operations typically are based on low grade ores, which result in the handling and production of large volumes of waste rock, overburden, slag and tailings. Due to the presence of minor amounts of metals in the natural rock matrix, these wastes or some of their constituents may sometimes be administratively classified as "hazardous" even though they exhibit little or no toxicity.

There are other industries that generate relatively small amounts of residuals that in themselves or by the presence of chemical contaminants are hazardous and may be extremely toxic in small amounts to human and other life forms. These are the residuals that were the focus of Superfund, not mining and mineral processing wastes.

Although mining and mineral processing wastes are part of the overall environmental issue of prudent waste management, it is essential that any amendments to CERCLA reflect the differences between mining wastes and other wastes that present substantially greater risks.

Waste-end tax provisions ostensibly are intended to reduce waste generation and discourage land disposal. A tax on mining and mineral processing wastes would only increase costs without furthering these goals. Furthermore, waste-end tax provisions would place a burden on the domestic industry that would not apply to imports.

While at one time H.R. 5640's provisions on waste-end taxes did recognize the inequity of taxing mining and mineral processing wastes, that distinction no longer appears in the bill. Instead, a single mandate was given to the Treasury Department to develop broad legislative proposals for a waste-end tax. On the Senate side, it is essential than any imposition of waste-end taxes take fully into account the unique characteristics of our industry's wastes, the differences between our wastes and those of other industries, and the unfair advantage a waste-end tax would give to our foreign competitors.

Conclusion

While we have pressed our concerns and suggestions on nonfinancial issues of Superfund before other committees, and will continue to do so, we ask that the Senate Committee on Finance keep in mind the following points, so as to avoid gross inequities in CERCLA funding:

1. Mining and mineral processing generate high volumes of wastes that, while containing metals or other substances that can be administratively classified as hazardous, exhibit little or no toxicity.

2. Mining and mineral processing waste disposal practices other than landfill and/or surface impoundments are infeasible, except for certain relatively small quantity wastes.

3. Domestic prices are largely determined by the highly competitive international market (and not by domestic producers), causing an unfair burden on the domestic industry whenever government-mandated costs do not fall equally on imports.

4. A "front-end" or "waste-end" tax could have serious, unintended and inequitable effects on the domestic mining and mineral processing industry because of the unique economic circumstances of the minerals industry and the differences between its wastes and the wastes of many other industries.

Again, AMC appreciates the opportunity to submit this statement to the Committee on Finance, and we are prepared to respond should members of the committee have any questions regarding our industry's position.

APPENDIX I

SUPERFUND TAX ON MINERALS INDUSTRY:

CURRENT LAW COMPARED TO H.R. 5640

(Based on 1983 data in short tons)

Current Law (Annual Rate) - $4,305,806

H.R. 5640	With Waste-End Tax	Without Waste-End Tax
1985	$109,261,835	$109,261,835
1986	136,405,024	136,405,024
1987	141,324,767	172,231,514
1988	156,105,794	182,127,413
1989	156,105,794	191,454,824
1990	156,105,794	191,454,824
TOTAL[1]	$855,309,008	$982,935,494

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[1] Not adjusted for rate of inflation as required by H.R. 5640 (i.e. percent of producer price increase). Consequently, the total tax is substantially understated.

SUPERFUND TAX ON MINERALS INDUSTRY - CURRENT LAW COMPARED TO H.R. 5640
(1983 data in short tons)

SUBSTANCE	CURRENT LAW TAX RATE/TON	1985 H.R. 5640 TAX RATE/TON	1983 AVG. PRICE/TON	U.S. PROD.	U.S. IMP.	TOTAL TAXABLE QUANTITY	CURRENT LAW REVENUE	1985 H.R. 5640 REVENUE
Antimony	$4.45	$30.00	$1,800	27,000	11,000	38,000	$ 169,100	$1,140,000
Arsenic	4.45	30.00	4,200	Unknown	187	187	800	5,610
Arsenic Trioxide	3.41	12.97	780	Unknown	12,125	12,125	41,300	157,261
Bromine	4.45	9.73	625	190,000	2,500	192,500	856,600	1,873,025
Cadmium	4.45	30.00	2,200	1,102	2,425	3,527	15,700	105,810
Chromium	4.45	30.00	7,500	0	210,000	254,800	934,500	7,644,000
Chromate	1.52	1.52	74	0	210,000	210,000	319,200	319,200
Cobalt	4.45	30.00	25,000	350	9,000	9,350	41,600	280,500
Cupric Sulfate	1.87	23.18	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cupric Oxide	3.59	30.00	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cuprous Oxide	3.97	30.00	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Lead Oxide	4.14	No tax	Unknown	185,224	13,636	198,860	823,280	No tax
Mercury	4.45	30.00	8,700	1,482	342	1,824	8,100	54,720
Nickel	4.45	30.00	6,400	88,700	144,000	232,700	1,035,515	6,981,000
Zinc Chloride	2.22	10.55	Unknown	8,775	487	9,262	20,562	97,714
Zinc Oxide	No tax	14.43	789	129,596	31,588	161,184	0	2,325,885
Zinc Sulfate	1.90	8.30	Unknown	10,969	584	20,815	39,549	172,764
Aluminum Sulfate	No tax	3.52	Unknown	Unknown	Unknown	Unknown	0	Unknown
Aluminum Phosphide	No tax	30.00	Unknown	Unknown	Unknown	Unknown	0	Unknown
Asbestos	No tax	5.76	403	77,162	220,462	297,624	0	1,714,314
Barium Sulfide	2.13	7.13	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Lead	No tax	8.27	440	1,146,402	148,812	1,295,214	0	10,711,423
Copper	No tax	23.60	1,560	1,600,000	550,000	2,150,000	0	50,740,000
Lithium Carbonate	No tax	30.00	2,960	30,000[1]	100	30,100	0	903,000
Manganese	No tax	22.69	64	0	485,000	485,000	0	11,004,650
Selenium	No tax	30.00	7,600	386	331	717	0	21,510
Uranium Oxide	No tax	30.00	38.21[2]	13,500	41[2]	13,500	0	405,000
Vanadium	No tax	30.00	7,000	3,401	1,750	5,151	0	154,530
Zinc	No tax	12.48	840	325,181	672,409	997,590	0	12,449,923
TOTALS							$4,305,806	$109,261,835

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[1] 1984 production estimate

[2] Survey of U.S. Uranium Marketing Activity, DOE/EIA-0403 (1983)

SUPERFUND TAX ON MINERALS INDUSTRY - CURRENT LAW COMPARED TO H.R. 5640
(1986 - 1990 PROJECTIONS)

	1986 Rate	1986 Revenue	1987 Rate	1987 Revenue	1987 W/O Waste End Rate	1987 W/O Waste End Revenue	1988 Rate	1988 Revenue	1988 W/O Waste End Rate	1988 W/O Waste End Revenue
Antimony	30.00	1,140,000.00	30.00	1,140,000.00	35.00	1,330,000.00	30.00	1,140,000.00	35.00	1,330,000.00
Antimony Dioxide	30.00	unknown	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Arsenic	30.00	5,610.00	30.00	5,610.00	35.00	6,545.00	30.00	5,610.00	35.00	6,545.00
Arsenic Trioxide	17.29	209,641.00	19.46	235,953.00	25.94	314,523.00	25.94	314,523.00	30.26	366,903.00
Bromine	12.97	2,496,725.00	14.59	2,808,575.00	19.46	3,746,050.00	19.46	3,746,050.00	22.70	4,369,750.00
Cadmium	30.00	105,810.00	30.00	105,810.00	35.00	123,445.00	30.00	105,810.00	35.00	123,445.00
Chromium	30.00	7,644,000.00	30.00	7,644,000.00	35.00	8,918,000.00	30.00	7,644,000.00	35.00	8,918,000.00
Chromite	1.52	319,200.00	1.52	319,200.00	1.70	357,000.00	1.70	357,000.00	1.98	415,800.00
Cobalt	30.00	280,500.00	30.00	280,500.00	35.00	327,250.00	30.00	280,500.00	35.00	327,250.00
Cupric Sulfate	30.00	unknown	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Cupric Oxide	30.00	unknown	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Cuprous Oxide	30.00	unknown	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Lead Oxide										
Mercury	30.00	54,720.00	30.00	54,720.00	35.00	63,840.00	30.00	54,720.00	35.00	63,840.00
Nickel	30.00	6,981,000.00	30.00	6,981,000.00	35.00	8,144,500.00	30.00	6,981,000.00	35.00	8,144,500.00
Zinc Chloride	14.07	130,316.00	15.83	146,617.00	21.10	195,428.00	21.10	195,428.00	24.62	228,030.00
Zinc Oxide	19.24	3,101,180.00	21.65	3,489,634.00	28.86	4,651,770.00	28.86	4,651,770.00	33.67	5,427,065.00
Zinc Sulfate	11.07	230,422.00	12.45	259,146.00	16.60	345,529.00	16.60	345,529.00	19.37	403,187.00
Aluminum Sulfate	4.69	unknown	5.28	unknown	7.04	unknown	7.04	unknown	8.40	unknown
Aluminum Phosphate	30.00	unknown	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Asbestos	7.68	2,285,752.00	8.64	2,571,471.00	11.52	3,428,628.00	11.52	3,428,628.00	13.44	400,067.00
Barium Sulfice	9.51	unknown	10.70	unknown	14.26	unknown	14.26	unknown	16.64	unknown
Lead	11.03	14,286,210.00	12.41	16,073,606.00	16.54	21,422,840.00	16.54	21,422,840.00	19.30	24,997,630.00
Copper	30.00	64,500,000.00	30.00	64,500,000.00	35.00	75,250,000.00	30.00	64,500,000.00	35.00	75,250,000.00
Lithium Carbonate	30.00	903,000.00	30.00	903,000.00	35.00	1,053,500.00	30.00	903,000.00	35.00	1,053,500.00
Manganese	30.00	14,550,000.00	30.00	14,550,000.00	35.00	16,975,000.00	30.00	14,550,000.00	35.00	16,975,000.00
Selenium	30.00	21,510.00	30.00	21,510.00	35.00	25,095.00	30.00	21,510.00	35.00	25,095.00
Uranium Oxide	30.00	405,000.00	30.00	405,000.00	35.00	472,500.00	30.00	405,000.00	35.00	472,500.00
Vanadium	30.00	154,530.00	30.00	154,530.00	35.00	180,285.00	30.00	154,530.00	35.00	180,285.00
Zinc	16.64	16,599,898.00	18.72	18,674,885.00	24.96	24,899,846.00	24.96	24,898,846.00	29.12	29,049,821.00
TOTAL		$136,405,024.00		$141,324,767.00		$172,231,574.00		$156,105,794.00		$182,127,413.00

SUPERFUND TAX ON MINERALS INDUSTRY - CURRENT LAW COMPARED TO H.R. 5640
(1986 - 1990 PROJECTIONS)
(Continued)

	1989 Rate	1989 Revenue	1989 W/O Waste End Rate	1989 W/O Waste End Revenue	1990 Rate	1990 Revenue	1990 W/O Waste End Rate	1990 W/O Waste End Revenue
Antimony	30.00	1,140,000.00	35.00	1,330,000.00	30.00	1,140,000.00	35.00	1,330,000.00
Antimony Dioxide	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Arsenic	30.00	5,610.00	35.00	6,545.00	30.00	5,610.00	35.00	6,545.00
Arsenic Trioxide	25.94	314,523.00	34.59	419,404.00	25.94	314,523.00	34.59	419,404.00
Bromine	19.46	3,746,050.00	25.95	4,995,375.00	19.46	3,746,050.00	25.95	4,995,375.00
Cadmium	30.00	105,810.00	35.00	123,445.00	30.00	105,810.00	35.00	123,445.00
Chromium	30.00	7,644,000.00	35.00	8,918,000.00	30.00	7,644,000.00	35.00	8,918,000.00
Chromite	1.70	357,000.00	2.27	476,700.00	1.70	357,000.00	2.27	476,700.00
Cobalt	30.00	280,500.00	35.00	327,250.00	30.00	280,500.00	35.00	327,250.00
Cupric Sulfate	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Cupric Oxide	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Cuprous Oxide	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Lead Oxide								
Mercury	30.00	54,720.00	35.00	63,840.00	30.00	54,720.00	35.00	63,840.00
Nickel	30.00	6,981,000.00	35.00	8,144,500.00	30.00	6,981,000.00	35.00	8,144,500.00
Zinc Chloride	21.10	195,428.00	28.13	260,540.00	21.10	195,428.00	28.13	260,540.00
Zinc Oxide	28.86	4,651,770.00	35.00	5,641,440.00	28.86	4,651,770.00	35.00	3,641,440.00
Zinc Sulfate	16.60	345,529.00	22.13	460,636.00	16.60	345,529.00	22.13	460,636.00
Aluminum Sulfate	7.04	unknown	9.35	unknown	7.04	unknown	9.35	unknown
Aluminum Phosphate	30.00	unknown	35.00	unknown	30.00	unknown	35.00	unknown
Asbestos	11.52	3,428,628.00	15.36	4,571,505.00	11.52	3,428,628.00	15.36	4,571,505.00
Barium Sulfide	14.26	unknown	19.01	unknown	14.26	unknown	19.01	unknown
Lead	16.54	21,422,840.00	22.05	28,559,469.00	16.54	21,422,840.00	22.05	28,559,469.00
Copper	30.00	64,500,000.00	35.00	75,250,000.00	30.00	64,500,000.00	35.00	75,250,000.00
Lithium Carbonate	30.00	903,000.00	35.00	1,053,500.00	30.00	903,000.00	35.00	1,053,000.00
Manganese	30.00	14,500,000.00	35.00	16,975,000.00	30.00	14,500,000.00	35.00	16,975,000.00
Selenium	30.00	21,510.00	35.00	25,095.00	30.00	21,510.00	35.00	25,095.00
Uranium Oxide	30.00	405,000.00	35.00	472,500.00	30.00	405,000.00	35.00	472,500.00
Vanadium	30.00	154,530.00	35.00	180,285.00	30.00	154,530.00	35.00	180,285.00
Zinc	24.96	24,898,846.00	33.28	33,199,795.00	24.96	24,898,846.00	33.28	33,199,795.00
TOTAL		$156,105,794.00		$191,454,824.00		$156,105,794.00		$191,454,824.00

H.R. 5640

SUPERFUND TAX PROVISION

SEC. 308. INCREASE IN TAX ON CERTAIN CHEMICALS.

(a) INCREASE IN RATE OF TAX; ADDITIONAL CHEMICALS TAXED.—Subsection (b) of section 4661 of the Internal Revenue Code of 1954 (relating to amount of tax imposed on certain chemicals) is amended by striking out the table contained in such subsection and inserting in lieu thereof the following:

In the case of:	The tax (before any inflation adjustment) is the following amount per ton:			
	Sales during 1985	Sales during 1986	Sales during 1987	Sales during 1988 and thereafter until the termination date
Organic substances:				
Acetylene	$29.91	$30.00	$30.00	$30.00
Benzene	6.60	8.80	9.90	13.20
Butadiene	9.79	13.05	14.68	19.58
Butane	4.87	5.80	6.30	8.40
Butylene	5.15	6.87	7.73	10.30
Coal-derived light oils	5.02	6.69	7.53	10.04
Coal tars	1.78	2.37	2.67	3.56
Ethylene	6.89	9.19	10.33	13.78
Methane	3.44	3.44	3.44	4.00
Naphthalene	6.89	9.19	10.33	13.78
Propylene	5.87	7.83	8.80	11.74
Toluene	5.19	6.92	7.78	10.38
Xylene (before 1988)	10.65	14.05	16.75	22.35
Xylene (after 1988)				15.40
Inorganic substances:				
Aluminum sulfate	3.52	4.69	5.28	7.04
Aluminum phosphide	30.00	30.00	30.00	30.00
Ammonia	2.64	3.52	3.96	5.28
Antimony	30.00	30.00	30.00	30.00
Antimony trioxide	30.00	30.00	30.00	30.00
Arsenic	30.00	30.00	30.00	30.00
Arsenic trioxide	12.97	17.29	19.46	25.94
Asbestos	5.76	7.68	8.64	11.52
Barium sulfide	7.13	9.51	10.70	14.26
Bromine	9.73	12.97	14.59	19.46
Cadmium	30.00	30.00	30.00	30.00
Chlorine	3.05	4.07	4.57	6.10
Chromite	1.52	1.52	1.52	1.70
Chromium	30.00	30.00	30.00	30.00
Cobalt	30.00	30.00	30.00	30.00
Copper	23.60	30.00	30.00	30.00
Cupric oxide	30.00	30.00	30.00	30.00
Cupric sulfate	23.18	30.00	30.00	30.00
Cuprous oxide	30.00	30.00	30.00	30.00
Hydrochloric acid	0.94	1.25	1.41	1.88
Hydrogen fluoride	23.50	30.00	30.00	30.00
Lead	8.27	11.03	12.41	16.54
Lithium carbonate	30.00	30.00	30.00	30.00
Manganese	22.60	30.00	30.00	30.00
Mercury	30.00	30.00	30.00	30.00
Nickel	30.00	30.00	30.00	30.00
Nitric acid	3.05	4.07	4.57	6.10
Phosphoric acid	7.65	10.20	11.48	15.30
Phosphorus	6.65	6.65	6.65	6.65
Potassium dichromate	15.03	20.04	22.54	30.00
Potassium hydroxide	9.83	13.11	14.75	19.66
Selenium	30.00	30.00	30.00	30.00
Sodium dichromate	18.48	24.64	27.72	30.00
Sodium hydroxide	2.82	3.76	4.23	5.64
Stannic chloride	30.00	30.00	30.00	30.00
Stannous chloride	30.00	30.00	30.00	30.00
Sulfuric acid	0.78	1.04	1.17	1.56
Uranium oxide	30.00	30.00	30.00	30.00
Vanadium	30.00	30.00	30.00	30.00
Zinc	12.48	16.64	18.72	24.96
Zinc chloride	10.55	14.07	15.83	21.10
Zinc oxide	14.43	19.24	21.65	28.86
Zinc sulfate	8.30	11.07	12.45	16.60

H.R. 5640

IF NO WASTE-END TAX IS ENACTED

SEC. 506. INCREASE IN TAX IF WASTE-END TAX NOT ENACTED.

(a) INCREASE IN TAX.—

(1) TAX ON PETROLEUM.—Subsections (a) and (b) of section 4611 of the Internal Revenue Code of 1954 (relating to environmental tax on petroleum), as amended by section 502, are each amended by striking out "7.86 cents" and inserting in lieu thereof "9.65 cents".

(2) TAX ON CERTAIN CHEMICALS.—Subsection (b) of section 4661 of such Code (relating to amount of tax imposed on certain chemicals), as amended by section 503, is amended by striking out the table contained in such subsection and inserting in lieu thereof the following:

"In the case of:	The tax (before any inflation adjustment) is the following amount per ton:		
	Sales during 1987	Sales during 1988 and 1989	Sales after 1989 and before the termination date
Organic substances:			
Acetylene	$35.00	$35.00	$35.00
Benzene	13.20	15.40	17.60
Butadiene	19.58	22.84	26.11
Butane	8.40	9.80	11.20
Butylene	10.30	12.02	13.73
Coal-derived light oils	10.04	11.71	13.38
Coal tars	3.56	4.15	4.75
Ethylene	13.78	16.08	18.37
Methane	4.00	4.67	5.33
Naphthalene	13.78	16.08	18.37
Propylene	11.74	13.70	15.65
Toluene	10.38	12.11	13.84
Xylene	21.30	21.77	20.53
Inorganic substances:			
Aluminum sulfate	7.04	8.40	9.35
Aluminum phosphide	35.00	35.00	35.00
Ammonia	5.28	6.16	7.04
Antimony	35.00	35.00	35.00
Antimony trioxide	35.00	35.00	35.00
Arsenic	35.00	35.00	35.00
Arsenic trioxide	25.94	30.26	34.59
Asbestos	11.52	13.44	15.36
Barium sulfide	14.26	16.64	19.01
Bromine	19.46	22.70	25.95
Cadmium	35.00	35.00	35.00
Chlorine	6.10	7.12	8.13
Chromite	1.70	1.98	2.27
Chromium	35.00	35.00	35.00
Cobalt	35.00	35.00	35.00
Copper	35.00	35.00	35.00
Cupric oxide	35.00	35.00	35.00
Cupric sulfate	35.00	35.00	35.00
Cuprous oxide	35.00	35.00	35.00
Hydrochloric acid	1.88	2.19	2.51
Hydrogen fluoride	35.00	35.00	35.00
Lead	16.54	19.30	22.05
Lithium carbonate	35.00	35.00	35.00
Manganese	35.00	35.00	35.00
Mercury	35.00	35.00	35.00
Nickel	35.00	35.00	35.00
Nitric acid	6.10	7.12	8.13
Phosphoric acid	15.30	17.85	20.40
Phosphorus	7.50	7.50	7.50
Potassium dichromate	30.06	35.00	35.00
Potassium hydroxide	19.66	22.94	26.21
Selenium	35.00	35.00	35.00
Sodium dichromate	35.00	35.00	35.00
Sodium hydroxide	5.64	6.58	7.52
Stannic chloride	35.00	35.00	35.00
Stannous chloride	35.00	35.00	35.00
Sulfuric acid	1.56	1.82	2.08
Uranium oxide	35.00	35.00	35.00
Vanadium	35.00	35.00	35.00
Zinc	24.96	29.12	33.28
Zinc chloride	21.10	24.62	28.13
Zinc oxide	28.86	33.67	35.00
Zinc sulfate	16.60	19.37	22.13"

APPENDIX II

ANALYSIS OF MINING SITES ON THE NATIONAL PRIORITIES LIST

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1.0 INTRODUCTION

The December 20, 1982 listing of 418 sites on the National Priorities List (NPL) was the culmination of an effort by EPA and numerous state agencies to identify the hazardous waste disposal sites in the United States which they feel present the greatest risk to human health and/or the environment.

Sites believed to present a hazardous waste problem were designated for the NPL by a two step procedure:

1. The states nominated sites for the NPL. Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), which established this procedure, each state must have at least one site on the NPL.
2. An intendedly objective scoring system developed by the Mitre Corporation for EPA (the "Mitre Model") was then used to select sites. Mitre Model scores were furnished by the states with their nomination. In reality, EPA or EPA contractors did the scoring for the states in many cases.

When implementing the Section 103(c) notification requirements, EPA received 11,000 reports of facilities where hazardous wastes are or had been potentially treated, stored, or disposed (Federal Register/Vol. 47, No. 137, July 16, 1983. Page 31181.). Assuming this is correct, 690, or about 6 percent of all sites, were nominated for the NPL. Thus, the winnowing process in Step 1 appears to be much greater than in Step 2 (418/690 = 61 percent). For mining sites, 31 locations were nominated, of which 17 sites were selected. Mining sites thus represent only about 4 percent (17/418) of the total NPL. Presumably, like the other sites, the mining sites nominated represent only a small fraction of the total mining site population.

Step 2 of the listing process is a comparison of Mitre Model scores to compose the NPL. The model calculates scores for five "pathways" of potential

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*Times Beach, Missouri became the 419th site soon after the initial listing, and on September 1, 1983 an additional 133 sites were listed which were too late for inclusion in this analysis.

human exposure: ground water, surface water, air, direct contact, and fire and explosion. The first three pathways are combined (by taking the square root of the sum of the squares) into an overall "migration" score. The migration score is essentially the determinant for listing on the NPL. According to the National Contingency Plan (47 FR, 137, 31180, July 16, 1982) placement of sites on the NPL is based primarily on the migration score. The fire and explosion and direct contact scores may be used to determine if emergency attention is needed.

The score for each of the three migration pathways is the product of scores for three "factors":

1. The existence or likelihood of a release. An "observed release" which is basically a measurement of concentration above background at any location automatically produces the maximum score.
2. A "characteristics" score which is the sum of scores for quantity and toxicity/persistence for water pathways and quantity, toxicity, reactivity, and incompatibility for the air pathway. The score for "quantity" is determined by the total volume of waste while the score for parameters like "toxicity/persistence" is determined by the most toxic and persistent component.
3. Characteristics of the population or sensitive environment at risk such as distance to point of exposure and number of people involved. Potential scores for population factors are much larger than for purely environmental factors.

Use of the Mitre Model involves an explicit statement of what the problem is believed to be. That is, the substances of concern, the exposure pathway, and the populations or resources at risk are identified as part of the scoring.

In this report, the validity of the Mitre Model is analyzed in general but also, since the model was developed primarily for analysis of chemical waste dumps, the focus was primarily on the validity of these problem statements for mining sites.

In this report mining sites are defined by whether the practices at the site would qualify an operator for membership in the American Mining Congress (AMC). These practices include extraction, smelting, and refining but not fabrication into a final product. Only sites where mining practices are responsible for most of the Mitre Model score are analyzed. Using these criteria the 31 mining sites analyzed, including 17 NPL sites, are shown in Table 1.

This report is concerned solely with the technical validity of the listing process. Legal issues, such as the propriety of including mining sites in Superfund, are not considered. Nor is the primary concern a site by site characterization; this is done only to the extent necessary to provide perspective on the validity of the Mitre Model results.

Topics are:

- How 17 mining sites came to be selected for the NPL, specifically patterns apparent in their nomination by the states and in their scoring by the Mitre Model (Section 2).
- Validity of the Mitre Model analysis (Section 3):
  - For the 17 NPL mining Sites
  - For mining sites in general
  - For any use

  and

- Recommendations for alternative analytical methods for mining sites (Section 3).

TABLE 1

SITES ANALYZED

NPL Sites	Mining Activity*
1. Anaconda Smelter Anaconda, MT	Copper smelter
2. Bunker Hill Smelter Smelterville, ID	Lead and zinc smelter
3. California Gulch Leadville, CO	Metal mines
4. Celtor Chemical Humboldt County, CA	Metals reclamation mill
5. Central City - Idaho Springs Clear Creek and Gilpin Counties, CO	Gold mines
6. Commencement Bay Tacoma, WA	Metal smelting
7. Homestake Mining Milan, NM	Uranium mill
8. Iron Mountain Mine Shasta County, CA	Copper mines
9. Milltown Reservoir Milltown, MT	Copper mines and smelter
10. Mountain View Mobile Homes Globe, AZ	Asbestos mills
11. Palmerton Zinc Palmerton, PA	Zinc refinery and smelter
12. Silver Bow Creek Silver Bow and Deer Lodge Counties, MT	Metal mines and mill
13. Tar Creek - Kansas Cherokee County, KA	Zinc and lead mines
14. Tar Creek - Oklahoma Ottawa County, OK	Zinc and lead mines
15. United Nuclear Churchrock, NM	Uranium mill
16. U.S. Titanium Nelson County, VA	Mine and refinery
17. Whitewood Creek Black Hills, SD	Gold mines and mills

TABLE 1 (Continued)

SITES ANALYZED

NPL Sites	Mining Activity*
18. Alder Mill Twisp, WA	Metals mill
19. Anaconda Copper Weed Hts, NV	Copper mine
20. Anaconda Refinery Great Falls, MT	Copper and zinc refinery
21. ASARCO Globe Facility Commerce City, CO	Metal recovery (smelting)
22. Blackbird Mine Cobalt, ID	Mine
23. Gateway Mill Site Gateway, CO	Vanadium mill
24. Hendricks Mine Boulder, CO	Radium and fluorspar mill
25. Holden Mine Holden Village, WA	Metals mine
26. Loma Mill Loma, CO	Vanadium mill
27. Placerville Tram Placerville, CO	Vanadium tram/ore bin
28. Rio Tinto Mountain City, NV	Copper mine
29. Sawpit Tram Sawpit, CO	Vanadium tram/ore bin
30. Silver Mountain Mine Loomis, WA	Gold and silver mine
31. Vanadium Mill Site Vanadium, CO	Vanadium mill

*This is the mining activity mainly responsible for the Mitre Model score. At some sites nonmining uses also contribute to the score. At other sites the use has now changed from that listed.

2.0 HOW MINING SITES CAME TO BE LISTED

This section analyzes the two steps in listing: (1) Nomination and (2) Comparison of Mitre Model scores. In order to obtain an overview of the process, the EPA officials involved in the process in Regions III, VI, VII, VIII, IX, and X, as well as Washington were consulted. Contacts were also made with officials in the States of Idaho, New Mexico, Oklahoma, Virginia and Washington. The individuals contacted together with the topics discussed are shown in Table 2.

2.1 Nomination Determined by Extent of Existing Information

The most common reason given by those contacted as to why certain sites (not necessarily mining) were chosen was that they were "well known." Of course, this may mean that a site is already thought to have environmental problems but it also means that previous information has probably been collected about a site. This is important because in generating Mitre Model scores to be submitted with the nomination a general rule is: The more information available the higher the score. This result is as true for sites not causing any significant harm to the environment as it is for genuine problem sites.

The Mitre Model score rises with the available information for the following reasons. The instructions for using the model specify that where there is no data for a factor it is assigned a value of zero. Further, where data are lacking for two or more factors the entire pathway score (air, ground water, or surface water) is set to zero. Finally, the maximum score for any pathway in general only occurs for a measurement, or other conclusive

TABLE 2

INDIVIDUALS AND ORGANIZATIONS CONTACTED DURING MITRE MODEL ANALYSIS

Individual/Organization	Topic
Tedd Jett, Virginia State Water Control Board, Valley Regional Office	U.S. Titanium, VA
Sam Donnelly, Director, EPA Lab, Annapolis, MD	U.S. Titanium, VA
Dr. Gulevich, Virginia, Department of Environmental Protection, Office of Hazardous Waste	U.S. Titanium, VA
Al Willett, Virginia State Water Control Board	U.S. Titanium, VA
Mr. Fairchild, U.S. Geological Survey, Oklahoma City	Tar Creek, OK
Sue Lutz, Librarian, Oklahoma Water Resources Board, Oklahoma City, OK	Tar Creek, OK
Ray Peterson, EPA, Region X, Seattle, WA	Bunker Hill, ID
Jack Sceva, EPA, Region X, Seattle, WA	Bunker Hill, ID
Idaho Department of Health and Welfare, Division of Health	Bunker Hill, ID
Tony Bartolomeo and Pat McManus, EPA, Region III; Philadelphia, PA	Palmerton Zinc, PA
Bill Wentworth, N.U.S., Field Investigation Team	Palmerton Zinc, PA
Paula Bisson, Compliance Branch, EPA, Region IX, San Francisco, CA	Mountain View Mobile Homes, AZ
Dwight Hoenig, EPA, Region VI, Dallas, TX	Tar Creek, OK, Homestake Mining, NM, United Nuclear, NM
Alice Fuerst, EPA, Region VII, Kansas City, MO	Tar Creek, KA
Bill Rothenmeyer, EPA, Region VIII, Denver, CO	Central City/Clear Creek, CO and California Gulch
Stan Hitt, Soil Scientist, EPA, Region VI, Dallas, TX	Tar Creek, OK
Ken Alkema, EPA, Region VIII, Helena, MT	Anaconda Smelter, ASARCO, and Milltown Reservoir, MT

TABLE 2 (Continued)

INDIVIDUALS AND ORGANIZATIONS CONTACTED DURING MITRE MODEL ANALYSIS

Individual/Organization	Topic
Steve Caldwell, EPA, Washington, D.C.	Guidance furnished states, overview of scoring results
Stephen Romanow, EPA, Region VI, Dallas, TX	United Nuclear and Homestake Mining, NM
Trent Thomas, New Mexico Environmental Improvement Division	Homestake and United Nuclear, NM
B. Gallaher, New Mexico Environmental Improvement Division, Water Pollution Control Bureau	Homestake Mining Company, NM
Eric Johnson, EPA, Region III, Philadelphia, PA	Palmerton Zinc, PA
Ron Conrad, New Mexico Environmental Improvement Division	United Nuclear, NM
Jim Dunn, EPA, Region VIII, Helena, MT	Anaconda Smelter, MT Anaconda Refinery, MT
Mike Hiel, Montana Department of State Lands, Helena, MT	Silver Bow Creek, MT
Terry Grotbo, Montana Department of State Lands Helena, MT	Silver Bow Creek, MT
Ray Peterson, Water Quality Bureau, Montana Department of Health and Environment, Helena, MT	Silver Bow Creek, MT
Ted Duaime, Montana Bureau of Mines and Geology, Butte, MT	Silver Bow Creek, MT
Harry Van Drielen, Nevada Conservation and Natural Resources Department, Environmental Protection Division, Carson City, NV	Rio Tinto Copper Mine, NV The Anaconda Copper Company site in Weed Heights, NV
John Arrigo, Montana Health Department, Solid Waste, Helena, MT	Anaconda Refinery, Great Falls, MT
Steve Provant, Idaho Department of Health and Welfare, Division of the Environment, Boise, ID	Blackbird Mine, Cobalt, ID
Philip Nyberg, Region VIII, U.S. Environmental Protection Agency	Loma, Gateway, Sawpit, Nieumire, and Placerville vanadium sites in Colorado and Hendricks Mining fluorspar site

evidence, of a concentration above background (irrespective of whether or not that concentration is significant in terms of health standards and criteria). Several individuals involved in the nomination process indicated that they had to abandon scoring a number of sites where there was insufficient evidence.

Most of the 31 mining sites nominated for the NPL have prior studies; some have a history of EPA and/or state negotiations and in a few cases consent decrees. Further evidence of the fact that these sites are well known is the fact that all of the 17 NPL sites and 10 of the 14 additional sites have "observed" (that is, measured releases) in some route category.

Although a site may be well known for some environmental impact it may not be in an area scored by the Mitre Model. For mining sites, for example, acid mine drainage (pH) effects and the effect on aquatic life are often of concern, this is the case at 8 of the 17 NPL sites. No score is given for acidity in the Mitre Model.* The point is that unrelated or irrelevant studies from a human hazard standpoint can increase the Mitre Model score by providing a basis for an "observed" release. As described further below, the Mitre Model score is almost entirely determined by the amount of information available about a site (particularly measurements) and how many people live near a site rather than by any real measure of risk.

2.2 Cost May Also Be a Factor in Nomination

The individuals interviewed about the site nomination process, (again not just for mining sites), mentioned three other considerations. First, in some cases they tried to nominate sites that were thought to pose an actual health risk, an aim which requires no further comment. Secondly, they acknowledged that political visibility was a factor. Finally, they indicated that for some sites there was a financial incentive for nomination of particular sites. This could be either through direct access to Superfund money or by getting Federal help in seeking cost reimbursement from private parties. This aspect is important for mining sites because they may be among the most expensive to fully remediate when there are enormous worked areas and waste quantities. The financial incentive issue may vary from state to state. In some cases, irrespective of whether remediation makes sense from an overall cost/benefit standpoint, there may be an incentive for states to nominate high cost sites rather than low cost when Superfund pays 90 percent of the cost. In other cases, the 10 percent state payment required may be a disincentive to listing, particularly for very expensive sites to remediate. A numer of states do not have a mechanism, apart from general revenues, to fund this 10 percent contribution.*

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*Effects of acid mine drainage would not seem in themselves to constitute an "observed release." According to the National Contingency Plan, evidence of a release must be quantitative, such as measured levels of contaminants above background concentrations.

2.3 How the Mitre Model Scores Mining Sites

The decision to list some of the nominated mining sites is based on Mitre Model results from exposure through air, ground water, and surface water pathways with a combined score cutoff point of 28.5. A number of sites were also scored on the basis of direct contact and one NPL mining site was scored on the basis of fire and explosion although there was nothing ignitable at the site. This and the fact that 3 of the 31 sites (Sites 8, 21, and 25) examined had numerical scoring errors (that is, errors in addition, etc.) indicates a lack of quality control. It has not been possible to investigate more subtle quality control matters involving the acquisition and use of data.

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*In order to expedite Superfund activities EPA no longer requires state contributions during planning activities. Contributions by the state are still required for the actual remediation.

Table 3 shows which routes contributed to scoring at the 31 sites. Unlike ground water and surface water the air route only contributes when there is a measured release (rather than a likely release). The reason the air pathway does not occur for the non-NPL sites is that they generally do not have as extensive measurements as do the NPL sites. Almost all mining sites consider both ground and surface water pathways in the scoring with the highest scores generally being obtained for the ground water.

Overall structure of the model in combining source, release, and population information is shown in Figure 1. Note that as illustrated the information required is designed to be readily available rather than selfconsistent. For example, quantity of waste refers to everything at the site even though only a small portion may be toxic.

To gain some insight into what distinguishes the NPL from the non-NPL sites a sensitivity analysis was performed for each parameter occurring in each pathway score. This was done by decreasing each parameter score by 50 percent and calculating the overall change in the total score. To clarify this procedure, an example follows. At the first entry in Table 1, the Anaconda Smelter Site in Anaconda, Montana, the total migration score is 58.7. In obtaining this result, "quantity of waste" in the ground water pathway was scored as 8 points. If the quantity of waste had been scored as 4 points, the migration score would drop by 6.0 points to 52.7. For the parameter "toxicity/persistence" in the surface water pathway a score of 18 was recorded. If this score had been recorded as 9 points, the migration score would drop by 2.7 points to 56.0. Hence we describe the overall score

TABLE 3

MITRE MODEL SCORING

Percentage Breakdown by Migration Pathways

	Air (%)	Ground Water (%)	Surface Water (%)
NPL Sites (17)			
Considered	41	94	88
Highest Score	18	65	18
Non-NPL Sites (14)			
Considered	0	100	100
Highest Score	0	71	29

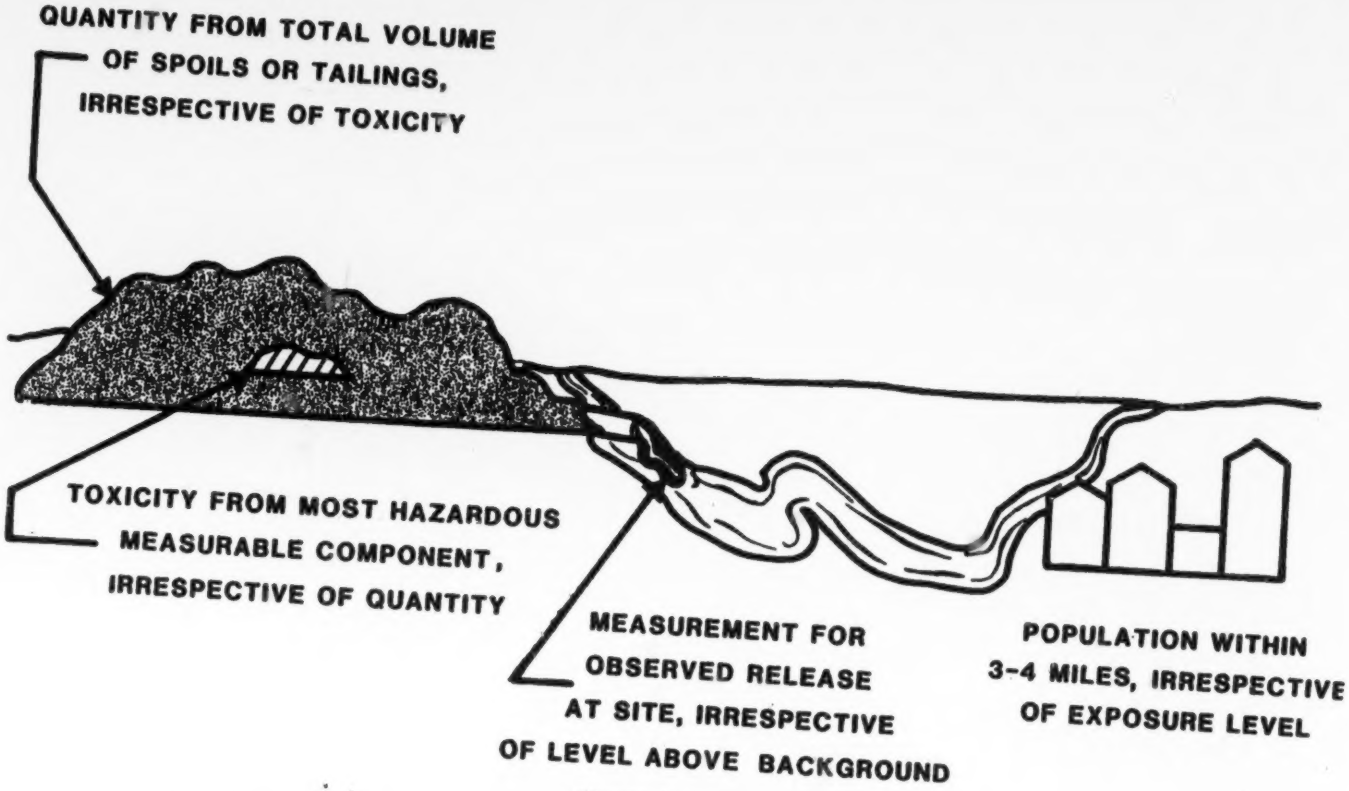

Figure 1.

OVERVIEW: MITRE MODEL METHODOLOGY

as being more sensitive to the value of the first parameter. Table 4 shows the results when all pathways are combined so that "observed release" represents any of the three pathways, etc. Different pathways were combined because basically they all behave the same way.*

The fact that the maximum number of sites occurs along the diagonal in Table 4 indicates a consistent pattern of parameter importance. Whether or not there is an observed release is almost always (16 times out of 17) the most important factor; population factors and distance to well or intake are usually the second most important factor and so on.

This picture of how the Mitre Model works can be simplified even further by just considering the top four parameters in Table 4 and by recognizing that for parameters such as distance to well/population served or distance to stream/population, the population portion of the parameter is a good indicator of this whole factor (of course it is the whole factor for the air pathway) since people require wells or surface water.**

Results are shown in Table 5 for the rule: "Observed release, population greater than 100 and (near) maximum toxicity, persistance, and quantity in any one pathway produces an NPL site--failure to satisfy these conditions does not."

The two sites not satisfying this rule are of particular interest. Alden Mill has the highest score of any non-NPL site, higher in fact than several of the NPL sites, but this is based on "unproven" arsenic content of the waste. This may be why it is an exception to the rule and was not listed. The other NPL site not satisfying the rule is Celtor Chemical. It scores maximum on

---

*Numbers may add to more than 17 horizontally, because more than one pathway is considered.

**The population figure used is whatever was mentioned in scoring that pathway at that site.

TABLE 4

SENSITIVITY ANALYSIS FOR 17 NPL SITES

	Parameter Importance				
	1st	2nd	3rd	4th	5th
"Observed release"	16	1	-	2	4
Distance to well or intake/population	-	12	5	1	3
Toxicity, persistence	-	4	11	2	-
Quantity	-	-	1	8	4
Water/land use	-	-	-	3	6
Containment	1	-	-	1	1

toxicity, persistence, quantity and has a population nearby of more than 100, but it is an inferred, rather than an observed, release. It has the second lowest score* of the NPL sites and in fact is lower than the score for Alden Mill. The Celtor Chemical site also scores fairly high on direct contact and is said to be a children's play area on the Hoopa Indian Reservation.**

2.4 Mining Site Characteristics Leading to Listing

In summary the way the Mitre Model treats mining sites can be represented by the equation:

$$\text{MITRE Model Score} = \text{Observed Release Score} \times \text{Quantity, Toxicity, Persistence Score} \times \text{Population Score}$$

As illustrated in Figure 2:

- Mining sites almost automatically receive the maximum quantity, toxicity, persistence score based on total amount of tailings, spoils, slag or discharge and on the presence of small amounts (relative to bulk waste) of metals, etc.
- A mining site which is nominated for the NPL will tend to have a maximum score for an "observed release" in at least one pathway (27 of the 31 did) because only sites that have been previously studied tend to be nominated and any concentration measurement above background (no matter how small) constitutes an observed release.
- With maximum scores in these two areas, the total score will be high enough for listing on the NPL unless there are virtually no people in the area.

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*The lowest scoring NPL site is the Mountain View Mobile Homes asbestos site.

**As noted earlier, according to the National Contingency Plan, direct contact and fire and explosion scores are supposed to be used only to determine if emergency attention is needed. Listing is supposed to be based solely on the migration score.

TABLE 5

PERCENTAGE OF SITES SATISFYING THE SELECTION RULE IN THE TEXT

NPL Sites*	94%	(1 site not an observed release, 16 satisfy the rule)
Non-NPL Sites	6%	(13 sites satisfy the rule, 1 does not)

*One NPL site has next to maximum score for one pathway for the toxicity/persistence parameter. Score in this pathway is based on copper rather than cadmium which was used in the other pathway and which would have produced a maximum score. All the others score the maximum in these categories.

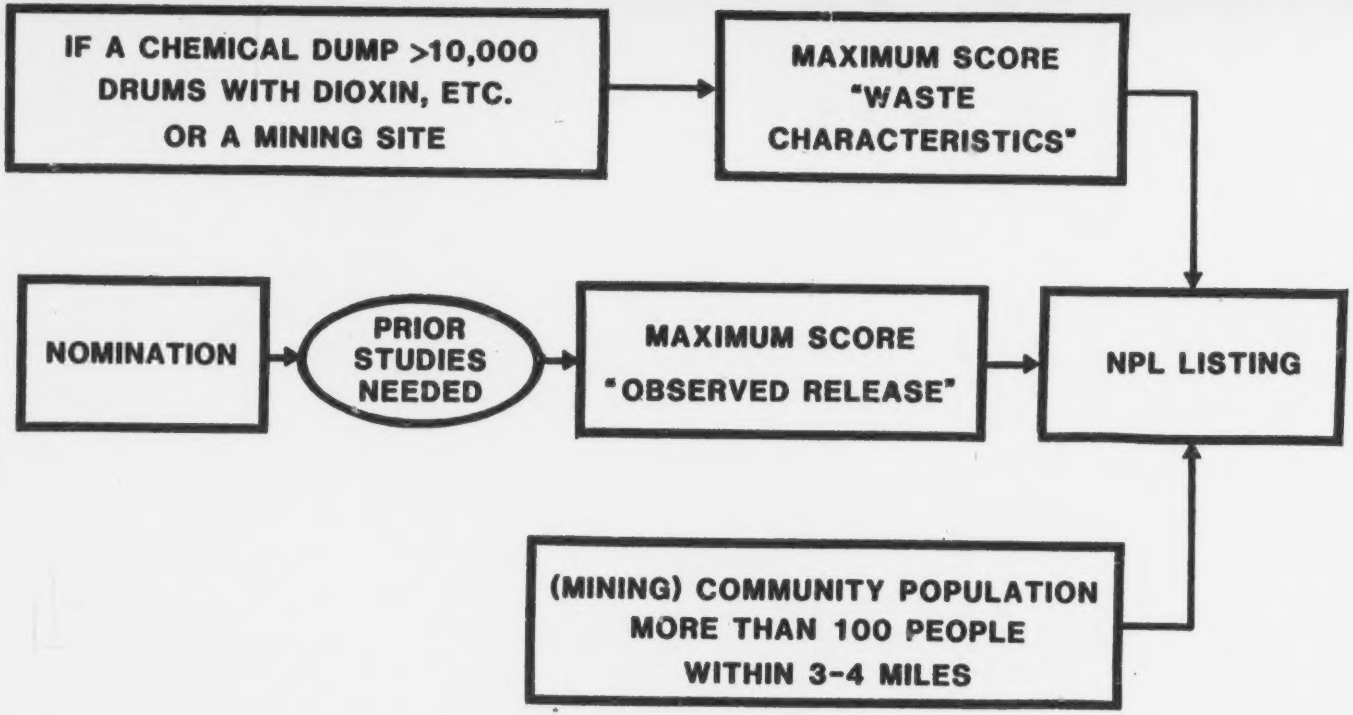

Figure 2.

NATIONAL PRIORITIES LIST (NPL) OVERVIEW:
MITRE MODEL LOGIC

2.5 Why 14 Sites Were Not Listed

Table 6 presents the specific reasons, in terms of the three factors comprising the rule, why the 14 non-NPL sites failed to score high enough for listing. Results are given only for the highest scoring pathway.

Lack of an observed release and little or no population nearby are the most common reasons for low scores. Of the five cases where quantity and toxicity/persistence scores were not (near) maximum, two of the sites were tram sites and the quantity of waste is actually relatively small. At another two of the five sites the toxicity and persistence scores were based on sulfuric acid and cyanide rather than trace metals in the waste. The toxicity/persistence scores for these substances are not maximum, as they are for metals. Had the scorer selected metals, which are invariably present at some low level, maximum toxicity/persistence scores would have been achieved.

TABLE 6

REASONS WHY 14 MINING SITES NOMINATED WERE NOT SELECTED FOR THE NATIONAL PRIORITIES LIST PROPERTIES OF HIGHEST SCORING PATHWAY

SITE NUMBER	NO OBSERVED RELEASE	LESS THAN (NEAR) MAXIMUM QUANTITY AND TOXICITY	POPULATION LESS THAN 100 WITHIN 3-4 MILES	OTHER
18			X	X(1)
19			X	
20			X	
21	X			
22			X	
23	X			
24	X			
25		X	X	
26	X			
27	X	X(2)		
28	X	X(3)		
29	X	X(2)		
30		X(4)		
31	X		X	
TOTAL	8	5	6	1

(1) "Unproven Arsenic Content of Waste," see text.
(2) Tram site
(3) Based on sulfuric acid not metals.
(4) Based on cyanide solution not metals.

3.0 VALIDITY OF THE MITRE MODEL PROBLEM STATEMENT

Assessment of the validity of the Mitre Model problem statements is preliminary since only information which could be immediately obtained was used. Furthermore, no site visits were made as part of the Mitre Model analysis. Nevertheless, for several sites information was obtained at odds with the Mitre Model problem statement.

3.1 Inconsistencies for the 17 NPL Sites

Areas of inconsistency for the most important pathway include:

1. Measurements which indicate concentrations below Federal or State criteria or standards at the location of exposure (6 sites, numbers 1, 3, 5, 8, 15, 16).
2. Drinking water aquifer not penetrated by "observed" release (2 sites: 13, 14).
3. Population upgradient from ground water contamination source (2 sites: 4, 16).

Although the present lack of high concentrations or aquifer contamination does not assure that contamination will not occur in the future, this information as to present conditions is obviously germane to setting priorities. Further, some sites are sufficiently old that if drinking water contamination were possible it probably would have occurred by now.

3.2 Validity of Model Application to Mining

We have concluded that the Mitre Model is not a useful tool for assessing or ranking hazards at mining sites because the score is produced by site characteristics which have little to do with the actual hazards at the site.

After reviewing the 31 sites nominated for the National Priorities List, the authors of this report are convinced that what distinguishes NPL sites from non-NPL sites is not primarily degree of hazard. Rather the distinction is based mainly on how much prior study has been done at a site and how rural the surroundings are. It could be argued that both of these factors correlate to some extent with degree of hazard. This may be true in some instances but such an indirect measure of hazard could be misleading in many circumstances. A direct measure of hazard would require explicit consideration of the concentrations to which people may be exposed.

Further, reviewing the EPA descriptions of the NPL sites furnished at the time of listing, together with the Mitre Model scores for each site, produces a distinct impression of randomness in the model results. Often the Mitre Model identifies the main problem as being something totally different than found in the site description or in prior (and more thorough) studies--a site commonly believed to have surface water impacts is listed because of air impacts, etc.*

As has been noted, special characteristics of mining sites that contribute to high Mitre Model scores are the large amounts of waste involved and the presence of trace metals in the waste. These characteristics tend to produce maximum scores in one of the three scoring areas--ground water, surface water, or air. Thus, scores in the other two areas which are too small to produce listing at a chemical dump may be sufficient to list a mining site.

The Mitre Model seems to have been developed with chemical dumps in mind. In that context its scoring system may be more useful. For example, maximum quantity of waste may indicate more than 10,000 drums of chemical present rather than, as for mining, more than 2,500 tons of spoils, slag, or tailings and whereas maximum toxicity at a chemical dump may indicate presence in concentrated form of very toxic or carcinogenic compounds, mining sites generally contain only the normal elements in the earth at the site.

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*This raises the question as to what extent, if any, Superfund money needs to be spent on items responsible for listing as opposed to other items at a site.

3.3 General Deficiencies in the Mitre Model

Deficiencies in the Mitre Model not specific to mining sites have been raised by a number of commentators, most recently by Congressional Office of Technology Assessment (OTA).* We repeat the gist of their three main points here because they seem particularly appropriate in light of our review of the 17 NPL mining sites:

1. "The score for hazard potential is based on only the most hazardous substance in the site rather than a composite of all constituents. In contrast, all substances are used to quantify the magnitude of this hazard..." (That is quantity is scored on the basis of all substances present).
2. "Low-population areas will tend to receive a lower score than high-population areas using the HRS, making it less likely that CERCLA funds for remedial action would be allocated to sites in these mostly rural areas, without regard to the relative number of persons actually exposed and the nature of the hazard. One major component of the HRS is based on the size of the population served. If 100 or fewer persons are being served by a threatened water source, the score would be less than if a larger number of people were involved. While it is reasonable to expect that those sites near urban centers may present a threat to large numbers of people, this is not always the case....:"
3. "Following a release from a site, however, distance to an exposure point has only marginal significance for the degree of hazard posed. Because of the mobility characteristics of contaminant plumes within ground water aquifers, it is possible that a well located 3 miles from a site could have higher concentrations of hazardous constituents than a well located only 2,000 ft from it. The important factor after constituents have been released to the environment is whether direct evidence of contamination exists at any exposure point...."

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*"Technologies and Management Strategies for Hazardous Waste Control," U.S. Government Printing Office, Washington, D.C. 20402, March, 1983, pg. 383.

Extending the argument of the last point, that concentration measurements at exposure locations are the best evidence of hazard, OTA raises the "general criticism" that no provision exists for incorporating additional technical information about a site beyond what is asked for by the Mitre model. For mining sites it is likely that waste composition and concentration in the environment comprise the two most important categories of additional information. This is because, unlike some chemical wastes, toxic materials in mining wastes are generally present only in very low concentrations.

EPA has already stated (FR 47, 137, 1982) that composition information was not used because they had been unable to develop a consistent approach for both sites where definitive information exists and sites where it does not. Similarly, they took the position that concentration data was frequently unavailable and that it would be unnecessarily expensive and time consuming to require it at each site (as well as noting other difficulties in data collection and interpretation). However, as noted previously, all the mining sites listed had concentration measurements since all had "observed releases" above background. Thus the data is generally available and could be utilized.

- Alternatives to the Mitre Model which draw valid comparisons between sites with different kinds of information, particularly waste composition or concentration information, do not presently exist. However, it seems to us, as it apparently did to OTA, that development of a simple methodology to do this should not be an insurmountable task. One way to do this is to permit branches in the scoring logic depending on the answers to questions such as: "Do ambient concentration measurements exist?" or "Can waste composition be estimated for maximum toxicity compounds?" In this way full information about a site could be utilized. Alternatively a different methodology could be developed specifically for mining wastes. The major change from the present form of the Mitre Model should be in the "Waste Characteristics" scoring area to take into account the special character of mining wastes, i.e., large quantities of waste with low concentrations of toxic materials.

4.0 SUMMARY AND CONCLUSIONS

This analysis has examined the process by which mining related sites were nominated and selected for the National Priorities List (NPL) and possible remedial action under Superfund. Principal conclusions of the study are as follows:

1. Since appreciable Mitre Model scores can be developed only for sites with sufficient previous study, only well known sites are nominated for the NPL. This may be true even for sites that have been studied for reasons not scored by the Mitre Model.

2. Sites which have been previously studied and are nominated are likely to have concentration measurements at or near the site above background. (This was true for all of the 17 NPL sites studied in at least one pathway). This automatically gives a site the maximum score in one of the three major scoring areas.

3. Mining sites also are likely to receive a maximum score for waste characteristics, the second major scoring area based on maximum scores for quantity, toxicity, and persistence of waste. Each of the 17 NPL sites scored maximum or next to maximum in these categories. Since toxicity and persistence are scored based on any measurable component, relatively small amounts of metals produce as large a score as would dioxin in a chemical dump. Since quantity is based on total amount of spoils, tailings, slag, or water discharge, the score is a large as for 10,000 drums or more of chemicals in a waste dump.

4. The third and last scoring area relates to the population within 3 or 4 miles. With maximum scores in the two previous areas the total score will be high enough for testing unless there are virtually no people in the area. If there are more than 100 people then, the overall score for a mining site will be large enough for the site to be placed on the proposed NPL. This is not a large population in view of the fact that mining, including smelting and refining, like other economic activity requires a workforce who may reside locally with their families.

5. Because of the preceding facts it is possible to predict, with a high degree of accuracy, whether or not a mining site will be listed by using the rule "observed release, population greater than 100 within 3 or 4 miles, and (near) maximum toxicity, persistence and quantity (in any one pathway) produces listing--failure to satisfy any one of these conditions does not."

6. Mining sites tend to receive maximum scores in one of three major scoring areas because of the quantities of waste involved and the presence of trace metals. Thus, scores in the other two

areas which are too small to produce listing at a chemical dump may be sufficient to list a mining site.

7. Only a preliminary review of the actual situation at the 17 mining sites proposed for the NPL has been possible, however for at least 9 sites there is crucial information which was not used and which provides a totally different perspective. Specifically:

   - concentration measurements below applicable standards

   - evidence that the drinking water aquifer is not penetrated by the observed release

   - ground water flow away from any population

   For some of the remaining 10 sites there may also be information contradicting the Mitre Model analysis but it was not available to us.

8. The Mitre Model is not valid for mining site application. It cannot be. The purpose of the model is to indicate degree of hazard or risk yet for mining sites high scores are produced by factors unrelated to any direct measures of hazard. Again this situation comes about largely because of the "bias" in the Mitre Model against the typical mining waste, i.e., large quantities of waste with the presence of trace metals.

9. Since mining sites may be among the most expensive to fully remediate by removal when there are extensive worked areas or large amounts of tailings, it is important that assessment of true hazards for these sites use all available information. Alternatives to the Mitre Model which incorporate information about waste composition and ambient concentrations are particularly needed for a valid treatment of mining sites.

Statement of American Trucking Associations

For the Record of Hearings

Before the Senate Committee on Finance

On Tax Issues Raised by S. 2892,

The Proposed Superfund Amendments

of 1984

September 19, 1984

Statement of American Trucking Associations
On Tax Issues Raised By S. 2892, the
Proposed Superfund Amendments of 1984

The American Trucking Associations, Inc., appreciates the opportunity to submit comments for the record on the tax aspects of S. 2892, the proposed Superfund Amendments of 1984. ATA, with offices at 1616 P Street, N.W., Washington, DC, is a federation with affilitated associations in every state and the District of Columbia. Thousands of shipments of hazardous materials are transported annually by motor carriers comprising the nation's trucking industry.

At the outset we emphasize that ATA supports legislation to improve emergency response capabilities for the cleanup of spills of hazardous materials. However, we are concerned over a Superfund tax alternative suggested by the Senate Committee on Environment and Public Works. The proposal, calling for a tax upon the transportation of hazardous substances or chemicals, was among a series of Superfund revenue alternatives recommended by the Public Works Committee in an attachment to a letter dated September 17, 1984, from the Public Works Committee to Senator Bob Dole, Chairman, and Senator Russell B. Long, ranking minority member, of the Finance Committee.

The transportation tax alternative proposed by the Public Works Committee is so vague that we cannot adequately address it in this statement. We believe, however, that the genesis of the recommendation is a tax option developed earlier by the staff of the Public Works Committee. That option would require common and contract motor carriers to collect from shippers and remit to the Treasury a fee of $10.00 for each "movement" of a hazardous material. While "movement" is not defined, we interpret it to mean shipment. We must take exception to the staff option, and the comments that follow are focused on the problems raised by that option.

The thrust of our objection to the tax is that it would have no relationship to the degree of hazard or volume of material involved in the transportation of various substances. The danger to the environment from spills is based on many factors, paramount of which are volume of spilled material, and its toxicity, degradibility and solubility.

One must remember that the term common carrier embraces pipelines, 30,000 gallon rail tank cars and barges, as well as trucks. There are serious inequities in this proposal. For example, in the trucking industry alone, the owner of a tank truck loaded with 8,000 gallons of a hazardous substance (one shipment to one consignee) would collect $10.00 from the shipper for that load. On the other hand, a dry freight carrier could haul six or eight (or more) small packaged shipments of hazardous materials in a single trailer and would be required to collect $10.00 from each of the shippers involved. Obviously, the true cost impact on a per-shipment basis as opposed to a volume basis creates inequities.

The implementation of the option would be especially difficult in the case of dry freight carriers because many of them transport thousands of small shipments of hazardous materials annually. Furthermore, the option fails to take into account the factor of intermodalism. Many commodities are transported to the end user by a combination of barge, rail and truck. While the option has not been fleshed out, each segment of these continuous intermodal movements conceivably could be subjected to the $10.00 fee for the same haul, regardless of the volume of the product transported by each common carrier unit.

Unfortunately, the proposal ignores the requirement of the Environmental Protection Agency that the transporter provide for cleanup of spills of hazardous substances. That requirement, in our opinion, nullifies the need and justification for the $10.00 fee.

The trucking industry is well aware of its responsibilities as a user of the nation's highways and as a transporter of hazardous shipments. We have developed materials and programs to train emergency responders to incidents involving hazardous materials and substances. We are members of a coalition composed of industries, state governments and local governments, which has recommended funding methods to the Senate Commerce Committee to be utilized for the purpose of establishing effective training programs for such responders. Our proposals for such funding are directly related to the materials being transported and the need for such programs. In addition, they do not discriminate against any type of transporter.

Within the trucking industry, common and contract carriers compete heavily with so called private carriage (transportation of a company's products in its own trucks). Because the option would impose the tax only upon the common and contract sectors, the $10.00 tax would prove to be a substantial and discriminatory competitive barrier within the trucking industry. In today's deregulated market, fractions of a cent per load frequently determine whether a product will move in private or common/contract carriage. This cost differential would be further exaggerated when the administrative costs of serving as a tax collector for the Internal Revenue Service is taken into account.

As noted earlier, in less than truckload operations it would not be unusual to have six or more individual shipments of packaged hazardous materials on a single truck. This compounds the administrative cost impact of the option, and the attendant increase in the paper work burden.

ATA supports legislation for funding to improve emergency response capabilities, but for the reasons set out in this statement we cannot support a fee on each shipment for cleanup of spills of hazardous substances. We urge the Committee to eliminate the $10.00 fee from its consideration.

TELEPHONE (303) 863-7300
TELEX 45-4483

ASAMERA OIL (U. S.) INC.
POST OFFICE BOX 118 · DENVER, COLORADO 80201

September 28, 1984

Mr. Roderick A. De Arment
Chief Counsel
Committee on Finance
Room SD-219
Dirkson Senate Office Building
Washington, D. C. 20510

Re: S. 2892 (Superfund Law) Hearing Dates:
September 19 and 21.

Dear Mr. De Arment:

Asamera Oil (U.S.) Inc. operates a small refinery capacity, 40,000 barrels per day, in Commerce City, Colorado. As an independent refiner striving to survive in a fiercely competitive market, we descry the pending Superfund reauthorization legislation as, not only an unfair and disproportionate financial burden placed upon our industry, but as a threat to our very existence.

Under the current proposal, S. 2892 reauthorizes the Superfund program for five years at $7.5 billion. The Environment bill would keep in place the dedicated tax on crude oil and certain chemical feedstocks. According to the American Independent Refiners Association (A.I.R.A.), financing this package under the current law would increase feedstock taxes on crude oil by more than 4 1/2 times to about $0.0364 per barrel, up from the present rate of $.0079 per barrel. At Asamera's current level of crude oil throughput, this would add over $250,000 in additional costs annually.

In our extremely competitive market, this additional cost could not be passed along to the consumer. Our price conscious wholesale customers are changing suppliers for price differences of less than 1/4 cent per gallon. This tax would add to our competitive disadvantage with major oil companies who are already financing refinery losses through crude oil production. Since 1981, over eighty independent refiners have gone out of business and a continuation of this trend will erode competition at the expense of the consumer. In addition to the unfair impact upon independent refiners, it appears that the proposed legislation would place an inequitable burden upon the refining industry in general when one compares funds generated versus hazardous waste produced.

We realize that the task of cleaning up the nation's hazardous waste sites will be enormously expensive and cannot be ignored. We support the need to find a fair and equitable solution to a problem which has grown with our nation's progress and achievements. We do not believe the solution lies in placing an inequitable financial burden upon the refining industry through an increased feedstock tax.

Sincerely,

ASAMERA OIL (U.S.) INC.

Thomas W. Johnson
General Manager
Crude Oil Supply

TWJ:jd

cc: Senator William Armstrong
Senator Gary Hart
CERPAC

ASSOCIATION
OF AMERICAN
RAILROADS

William H. Dempsey
President

September 25, 1984

The Honorable Robert J. Dole
Chairman
Finance Committee
United States Senate
Washington, D.C. 20510

Dear Senator Dole:

The Association of American Railroads welcomes the opportunity to comment on the various financing alternatives for the "Superfund" forwarded by the Environment and Public Works Committee. We will limit our comments to the proposals drafted by the staff of the Environment and Public Works Committee for a transportation tax and a hazardous waste disposal tax.

The transportation tax proposal as drafted by the staff of the Environment and Public Works Committee (attachment 1) would impose a tax of ten dollars on "each movement" of hazardous materials. The railroad industry has several objections to this proposal. First, hazardous materials are regulated under the Hazardous Materials Transportation Act and, for the most part, are not hazardous substances within the meaning of CERCLA. Many hazardous materials do not pose long term environmental problems and do not contribute to the disposal problems addressed by CERCLA. It would be inappropriate, therefore, to tax hazardous materials to raise funds for responses to CERCLA problems. Second, this proposal places railroads at a competitive disadvantage vis-a-vis the barge industry. A barge holds more of a commodity, whether it be a hazardous material or a hazardous substance, than a rail car. Thus, the ten dollar tax on transportation movements makes rail shipments more costly than barge movements especially if one rail car represents one rail movement. Finally, while this tax is supposed to be a tax on shippers, the railroads are placed in the position of functioning as tax collectors. This concept is unfair and unworkable. If a railroad takes a shipment and later collects the money owed, what is it to do if the shipper refuses to pay the tax? What if the shipper does not tell the railroad that the railroad is being given a taxable commodity? Railroads fulfill

1920 L Street, N.W., Washington, D.C. 20036 (202) 835-9126

their responsibility to clean up and pay for spills of commodities they carry. That should be the extent of their responsibilities. They should not have to function as tax collectors for purposes unrelated to transportation they provide.

The hazardous waste disposal tax (attachment 2) would be a tax on the disposal of hazardous waste. The tax would range from $15 to $250 per ton, depending on the commodity and method of disposal. In its proposed form, this "waste end tax" proposal might be counter-productive from a transportation perspective. Railroads are widely recognized as a comparatively safe mode for the transportation of hazardous materials. Of course, our industry suffers from occasional derailments, but we clean up those derailments. Cleaning up contaminated soil from derailments would be so expensive if this tax were enacted that railroads might decide not to compete for hazardous substances traffic, thereby diverting hazardous substances to modes less safe than railroads. A single derailment can easily result in a railroad cleaning up five to ten thousand tons of soil which, given the tax of $100 per ton that this proposal imposes on the disposal of soil, would result in a tax bill of up to one million dollars for a single incident even if the railroad acted responsibly. Such a "tax" would amount to a penalty, not a tax. The waste end tax has always been envisioned as a true tax that would apply to manufacturers making a profit from the process producing the waste. Railroads do not profit from waste created by a derailment, and if tons of soil have to be disposed of because of a derailment, the large amount of soil has been contaminated by a relatively small amount of hazardous substance. The waste end tax should not cover those cleaning up releases.

The Association of American Railroads would be happy to answer any questions concerning our comments. Thank you for the opportunity to forward our comments.

Sincerely,

ATTACHMENT 1

FEES - FUND

OPTION 4
TRANSPORTATION TAX

A. Effective 180 days after enactment, each substance which is defined as a hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 is deemed to be a hazardous material for purposes of the Hazardous Materials Transportation Act. Within 270 days after enactment, the Secretary of Transportation shall promulgate regulations requiring the shippers of such materials to require that shipping papers to be provided by a shipper of such materials to common or contract carriers.

B. Any shipper failing to provide such papers to a common or contract carrier shall be liable under section 107 of the Comprehensive Environmental Response, Liability and Transportation Act in lieu of the carrier in the event of any release occurring during the course of transportation if the carrier can demonstrate that he did not have actual knowledge that the material was a hazardous material.

C. Effective 365 days after enactment, each common or contract carrier shall collect and remit to the Treasury a fee of $10 for each movement of a hazardous material.

ATTACHMENT 2

FEES - FUND

OPTION 6
WASTE END TAX

A. For wastes with a reportable quantity of one pound or less --

1. Those disposed of in landfills, surface impoundments or Class IV wells to pay a tax of $250 per ton.

2. Those disposed of by other means to pay a tax of $30 per ton.

B. For wastes with a reportable quantity of more than one pound --

1. Those disposed of in landfills, surface impoundments or Class IV wells to pay a tax of $100 per ton.

2. Those disposed of by means other than landfill, surface impoundment, or Class IV injection to pay a tax of $15 per ton.

C. All taxes calculated on a total weight basis.

D. Exemptions:

1. Wastes, the regulation of which have been suspended by Act of Congress. Imposition of a tax on such wastes would require an affirmative Congressional enactment.

2. Wastes which are treated or recycled and, therefore, result in no release to the environment.

E. Addition of waste streams for the purpose of taxation: those waste streams resulting from the manufacture of the following substances are to be included in the waste end taxing program unless already regulated by subtitle C of the Resource Conservation and Recovery Act. Such waste streams are to be taxed at the rate applicable to those wastes with a reportable quantity of one pound or less:

SEE ATTACHMENT A.

ATTACHMENT A

CHEMICALS HAVING SUBSTANTIAL EVIDENCE OF CARCINOGENICITY WITH WASTE STREAMS REPORTEDLY NOT REGULATED BY RCRA

2-Acetylaminoflourene
Acrylonitrile
4-Aminobiphenyl
Amitrole
Aramite
Auramine
Azaserine
Benz(c)acridine
Benz(a)anthracene
Benzidine
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(j)fluoranthene
Chlorambucil
Chloroalkyl Ethers
Chlorobenzilate
Chrysene
Cycasin
Cyclophosphamide
Diallate
Dibenz(a,h)acridine
Dibenz(a,j)acridine
Dibenz(a,h)anthracene
7H-Dibenzo(c,g)carbazole
Dibenzo(a,e)pyrene
Dibenzo(a,h)pyrene
Dibenzo(a,i)pyrene
1,2-Dibromo-3-chloropropane
1,2-Dibromoethane
3,3'-Dichlorobenzidine
1,2-Diethylhydrazine
Diethylstilbestrol
3,3'-Dimethoxybenzidine
p-Dimethylaminoazobenzene
7,12-Dimethylbenz(a)anthracene
3,3'-Dimethylbenzidine
Dimethylcarbamoyl Chloride
1,1-Dimethylhydrazine
1,2-Dimethylhydrazine
2,4-Dinitrotoluene
1,4-Dioxane
1,2-Diphenylhydrazine
Ethylene Bis Dithiocarbamate
Ethyleneimine
Ethylene Oxide
Ethylenethiourea
Ethyl Methanesulfonate
Formaldehyde
Hexachlorobutadiene
Hydrazine
Indeno(1,2,3-cd)pyrene
Iron Dextran
Insosafrole
Kepone
Lasiocarpine
Melphalan
Methapyrilene
3-Methylcholanthrene
4,4'-Methylenebis
Methyl Iodide
Methyl Methanesulfonate
N-Methyl-N'-nitro-N-nitrosoguanidine
Mitomycin C
Mustard Gas
1-Naphthylamine, technical grade
Nitrogen Mustard and its hydrochloride
Nitrogen Mustard N-oxide
 and its hydrochloride
5-Nitroquinoline-1-oxide
Nitrosamines
Pentachloronitrobenzene
Phenacetin
Pronamide
1,3-Propane Sultone
6-Propiolactone
Prophylthiouracil
Safrole
Streptozotocin
2,3,7,8-Tetrachlorodibenzo-p-dioxin
Thioacetamide
Thiourea
o-Toluidine Hydrochloride
Toxaphene
Trichloroethylene
2,4,6-Trichlorophenol
Tris(1-aziridinyl)phosphine sulfide
Tris(2-3-dibromopropyl)phosphate
Trypan Blue
Urethane

PESTICIDES IDENTIFIED FOR A REBUTTABLE PRESUMPTION AGAINST REGISTRATION WITH WASTE STREAMS REPORTEDLY NOT REGULATED BY RCRA

Benomyl
Diallate
Dimehtoate
EBDC
Ethylene Dibromide
EPN
Ethylene Oxide
Maleic Hydrazide
Pentachloronitrobenzene
1080
Strychnine Sulfate
Thiophante Methyl
Trifluralin
Captan
Capbaryl
DDVP
Methanearsonates
Naled
Parquat
Piperonyl Butoxide
Rotenone
Triallate
Acrylonitrile
Aramite
Benzac
Chloranil
Chlordecone
Copper Acetoarsenite
DBCP
Diflubenzuron
Picloram
Amitraz
Chlorobenzilate
Pronamide

STATEMENT OF ROBERT J. WARDELL
PRESIDENT, COPPER AND BRASS FABRICATORS COUNCIL, INC.
TO THE
SENATE COMMITTEE ON FINANCE

SEPTEMBER 28, 1984

The Copper and Brass Fabricators Council strongly opposes the imposition of an environmental excise tax under the Superfund program on refined copper and zinc.

The Council represents 22 domestic brass mill companies which account for over 85 percent of U.S. production of brass mill products. These companies roll, draw, or extrude from copper and copper alloys various types of brass mill products such as plate, sheet, strip, tube, pipe, rod and nonelectrical (mechanical) wire. Zinc is the industry's principal alloying element. The American brass mill industry employs approximately 27,000 workers in 23 states. The economic health of this industry is dependent upon an adequate supply of reasonably priced copper and zinc.

The House bill to reauthorize Superfund (H.R. 5640) would expand the program sixfold from $1.6 to $10.2 billion over the five year period beginning October 1, 1985. To raise additional funds, the House bill would add another 20 chemicals and metals to the list of taxable materials.

While the Council supports reauthorization of Superfund, we believe that the tax provisions applicable to refined copper and zinc in H.R. 5640 were ill-conceived and enacted in haste, without appropriate consideration of the impact on the affected industries. The revenue-raising provisions for Superfund do not expire until September 30, 1985. EPA will have completed by December, 1984, a comprehensive study on all aspects of Superfund, including the most appropriate and cost-effective methods of financing it, and yet the House could not wait.

No primary metals are currently subject to an environmental excise tax under Superfund, and there is no evidence to suggest that this policy should now be changed. The House Ways and Means Committee, however, took the position that elements which are "found" at hazardous waste sites should be taxed, without any assessment as to whether or not they are toxic or otherwise hazardous. Such a position is scientifically unsound and extremely unfair to domestic producers and fabricators of refined copper and of zinc. Both metals are benign, being neither toxic nor hazardous, nor of a character to be included in the Superfund cleanup program.

The original intent of Superfund was to tax toxic chemicals that contribute to hazardous waste sites. Refined copper and zinc are not toxic and should not be included on the taxable list. The metals themselves are environmentally benign. Those copper and zinc compounds which are classified as hazardous are already subject to Superfund taxes.

The House bill (H.R. 5640) places refined copper at a competitive disadvantage with aluminum, its chief competitive metal. Aluminum is not taxed in the House bill on the grounds that it is nontoxic. Copper and zinc are no more toxic than aluminum, and none of them should be taxed.

The imposition of an environmental excise tax on refined copper and zinc will result in a two-tier price structure consisting of higher-priced domestic and imported refined copper and zinc, and lower-priced world copper and zinc. Such two-tiered price structures would put U.S. fabricators at a competitive disadvantage with foreign fabricators and result in a related and a further increase in the already high level of imports of fabricated products. On September 6, 1984, President Reagan refused to impose import restrictions on refined copper, as requested by certain domestic copper producers in an "escape clause" proceeding, precisely because to have done so would have created a similar two-tier price system which would have seriously disadvantaged the U.S. copper fabricating industry.

In conclusion, we all recognize the need to fund the cleanup of abandoned waste sites containing hazardous and toxic materials and substances. But to impose an environmental excise tax on a limited number of metal working industries, and not on their competitive counterparts (in this case, aluminum), nor on all industries whose non-toxic and non-hazardous products, by-products, or wastes are also "found" at such sites, is blatantly discriminatory, unfair, and without rational justification. Accordingly, we strongly urge the exclusion of refined copper and zinc from the tax provisions of the Superfund reauthorization bill now being considered by the Committee on Finance.

Thank you.

WALKER F. NOLAN, Vice President, Legislative Affairs

EDISON ELECTRIC INSTITUTE The association of electric companies

1111 19th Street, N W
Washington, D C 20036
Tel (202) 828-7400

September 18, 1984

To: Each Member of the Senate
Committee on Finance

Dear Senator:

The House of Representatives recently adopted the Superfund Expansion and Protection Act of 1984 (H.R. 5640), which would, among other things, increase the petroleum tax from 0.79 to 7.86 cents per barrel in order to finance the expanded scope of the law proposed under the bill. While we endorse the worthy objectives of this legislation, we are concerned that such a tax increase would require electric utility ratepayers to make an additional contribution to a cleanup effort unrelated to their consumption of electricity.

We also have reservations as to the rationale which would permit a tenfold price increase to be imposed on the electric ratepayers while a much smaller percentage increase is being proposed for other industries. Surely, this inequity should be carefully reviewed by the Finance Committee. This matter will be before the Committee in the near future as you consider S. 2892 and other related legislation.

The consumption of petroleum as a boiler fuel is a high-efficiency use of the product and is regulated under Federal law. Such use does not result in the generation of harmful waste products that the Superfund law is intended to address. A tax increase of $17 million imposed upon our ratepayers to solve the problem of hazardous waste site cleanup is inequitable since the electric utility industry does not contribute to that problem and the burning of petroleum products in utility boilers is otherwise regulated.

We urge you to take these points (including those in the attached briefing paper) into consideration when developing a Superfund taxing plan.

Sincerely yours,

Walker Nolan

Walker F. Nolan

Attachment

BACKGROUND ON UTILITY CONCERNS ON THE TAXING PROVISIONS OF SUPERFUND REAUTHORIZATION LEGISLATION

Pending in both the House and Senate are bills which would reauthorize and make substantive amendments to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, due to expire on September 30, 1985. While the utility industry has a number of concerns about these bills, the focus of this discussion is on the inequity to the utility ratepayer of a ten-fold increase in the petroleum tax (.79¢ per barrel to 7.86¢ per barrel) contained in the House passed bill (H.R. 5640). We urge the House to reconsider its position on taxing petroleum products which are burned in utility boilers and also urge the Senate to take the following points into consideration when developing a taxing plan:

- the burning of petroleum products in utility boilers does not create an environmental problem that is not otherwise regulated and therefore should not be subject to the tax on petroleum products which is designed to tax that petrochemical feedstock which eventually produces hazardous or toxic waste;
- the H.R. 5640 significantly increases the electric utility share of the total contributions to the Superfund. The effect of this, in many cases, is to raise the tax collections through the fuel adjustment clause which becomes an automatic pass through to the consumer.
- Under the current law, we estimate that in 1984 utilities will contribute 0.58 percent of the fund. Under H.R. 5640, in 1986, this share will increase to 1.6 percent, about a 176 percent increase in the distribution of the share of contributions paid by the consumers of electricity.
- This increased distribution will also fall disproportionately on some areas. The New England area bears a share five times greater than the electric utility industry average. New York's share is three and one-half times greater and Florida's is three times greater.
- Thus, we see the electric utility industry contributing an increasing share of the tax and a disproportionate geographical distribution. These inequitable distributions of the effect of the Superfund tax will be borne by the consumer.

September 5, 1984

STATEMENT OF
EL PASO PRODUCTS COMPANY
SUBMITTED TO THE
COMMITTEE ON FINANCE
UNITED STATES SENATE

Regarding

HEARINGS ON TAX ISSUES
RAISED BY THE SUPERFUND
LEGISLATION

Washington, D. C.

September 19 and 21, 1984

EL PASO PRODUCTS COMPANY IS A SMALL EMPLOYEE-OWNED COMPANY. THE COMPANY WAS ORGANIZED IN 1957 AS A WHOLLY OWNED SUBSIDIARY OF EL PASO NATURAL GAS COMPANY. OVER THE YEARS EL PASO PRODUCTS HAS BEEN IN THE PETROCHEMICAL, NATURAL GAS LIQUIDS, REFINERY AND OIL AND GAS PRODUCTION BUSINESS. FOR THE LAST SEVERAL YEARS, BEING AND CONCENTRATING ONLY IN THE PETROCHEMICAL BUSINESS. WE HAVE PLANTS LOCATED IN DELAWARE, WISCONSIN, TEXAS AND CALIFORNIA. WE MANUFACTURE PLASTIC FILM, ETHYLENE, PROPYLENE, STYRENE, POLYETHYLENE, POLYPROPYLENE AND BUTADIENE.

DURING THE LAST OF DECEMBER 1982, BURLINGTON NORTHERN MADE A TENDER OFFER FOR THE EL PASO COMPANY, THE PARENT HOLDING COMPANY OF EL PASO NATURAL GAS COMPANY AND EL PASO PRODUCTS COMPANY. SHORTLY THEREAFTER THE EL PASO PRODUCTS COMPANY SENIOR OFFICERS WERE ADVISED THAT THE CHEMICALS AND PLASTICS BUSINESS DID NOT FIT INTO THE EL PASO COMPANY'S LONG TERM PLANS AND WOULD BE SOLD IF POSSIBLE. DURING THE PRECEDING 18 MONTH PERIOD THE CHEMICAL SEGMENT HAD EXPERIENCED LARGE BOOK LOSSES (APPROXIMATELY $55MM). TWO INVESTMENT BANKING FIRMS - MERRILL LYNCH AND LEHMAN BROTHERS KUHN LOEB WERE EMPLOYED TO SELL THE BUSINESS. LATE IN JULY 1983 THE CHIEF EXECUTIVE OFFICER (CEO) OF THE EL PASO COMPANY INFORMED MR. W. D. NOEL, EX-PRESIDENT AND CHAIRMAN OF THE BOARD FOR EL PASO PRODUCTS COMPANY (RETIRED IN 1980) THAT HE SERIOUSLY DOUBTED THAT THE HOLDING COMPANY WOULD BE SUCCESSFUL IN FINDING A SUITABLE BUYER FOR THE CHEMICAL AND PLASTICS BUSINESS AND ASKED MR. NOEL WHETHER HE HAD ANY INTEREST IN HEADING A GROUP OF EL PASO PRODUCTS COMPANY OFFICERS AND EMPLOYEES THAT HAD AN INTEREST IN KEEPING THE BUSINESS IN OPERATION. THE EL PASO COMPANY CEO

WAS ASKED WHAT THE EL PASO COMPANY PLANNED TO DO IF NO SUITABLE BUYER WAS FOUND. HE STATED THAT THE EL PASO COMPANY WAS PREPARED TO SHUT THE OPERATIONS DOWN, WRITE THEM OFF THE BOOKS, ISSUE FINAL CHECKS TO THE EMPLOYEES AND LOCK THE GATES. MR. NOEL AND THE REST OF THE EL PASO PRODUCTS COMPANY CURRENT MANAGEMENT GROUP DECIDED, FOR THE SAKE OF THE EMPLOYEES AND COMMUNITIES WHERE OUR FACILITIES ARE LOCATED, THAT THERE SHOULD BE AN ATTEMPT TO SAVE THE BUSINESS. IT WAS RECOGNIZED THAT IT WOULD BE NO SMALL TASK TO SAVE A BUSINESS THAT HAD SUSTAINED A $42 MILLION BOOK LOSS IN 1982 AND HAD ALREADY LOST $13 MILLION IN THE FIRST SIX MONTHS OF 1983. (THE 1983 BOOK LOSS FOR THE ENTIRE YEAR WAS $25 MILLION.) MAJOR COST REDUCTIONS WERE INITIATED.

IN DECEMBER 1983 THE MANAGEMENT GROUP CONSUMATED THE ACQUISITION OF THE CHEMICALS AND PLASTICS BUSINESS FROM THE EL PASO COMPANY, THE PURCHASE PRICE WAS 210 MILLION DOLLARS. EL PASO WAS PAID $70 MILLION CASH WHICH WAS BORROWED FROM CHASE MANHATTAN AND TEXAS COMMERCE BANKS. THE BALANCE OF $140 MILLION IS PAYABLE OVER THE NEXT TEN YEARS, AT $14 MILLION PER YEAR.

THE CURRENT EL PASO PRODUCTS COMPANY IS NO LONGER PART OF THE BURLINGTON/EL PASO CONGLOMERATE GROUP BUT A SMALL EMPLOYEE OWNED COMPANY. HOWEVER, THE KEY TO THIS EQUATION OF BUSINESS SUCCESS IS THE ABILITY TO GUIDE YOUR OWN DESTINY. THE MANAGEMENT GROUP THAT PURCHASED THIS BUSINESS WENT TO THE BANKS AND PRESENTED FORECASTED AND PROJECTED INCOME STATEMENTS TO JUSTIFY THEIR ABILITY TO REPAY THE LOANS FOR THE PURCHASE OF THE BUSINESS. AS I PREVIOUSLY STATED, THEY INITIATED MAJOR COST REDUCTION PROGRAMS WHICH WERE INCLUDED IN THE FORECASTED FINANCIAL

DESTRUCTION WILL ALSO APPLY TO SMALL PETROCHEMICAL MANUFACTURERS SUCH AS EL PASO PRODUCTS COMPANY. IF THE FINANCE COMMITTEE WANTS TO SHUT DOWN EL PASO PRODUCTS COMPANY AND THE SMALL CHEMICAL BUSINESS OPERATIONS IN THE U.S., YOU MAY WELL SUCCEED BY PASSAGE OF A SUPERFUND BILL WITH EXORBITANT TAX ON FEEDSTOCKS. THE 50,000 LOST JOBS REFERRED TO MAY ONLY BE THE TIP OF AN ICEBERG. THIS IS SUPPORTED BY HAROLD A. SORGENTI, ARCO SENIOR VICE PRESIDENT AND PRESIDENT OF ARCO CHEMICAL COMPANY IN HIS TESTIMONY BEFORE THE SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE MAY 23, 1984.

> . . . (HE) INDICATED THAT COMPANIES PAYING THE BULK OF THE SUPERFUND'S TAX ON CHEMICAL INGREDIENTS MAY CLOSE DOWN THEIR PETROCHEMICAL OPERATIONS IF THE TAX IS INCREASED GREATLY.
>
> SORGENTI TOLD THE PANEL THAT ONLY 12 COMPANIES PAY ALMOST 70 PERCENT OF THE CURRENT $1.6 BILLION SUPERFUND TAX, AND PETROCHEMICAL MANUFACTURING CONSTITUTES ONLY A PORTION OF THEIR BUSINESS.
>
> WHILE THESE COMPANIES ARE PROFITABLE OVERALL, IT IS "UNREALISTIC" TO EXPECT THEM TO CONTINUE TO MANUFACTURE PETROCHEMICALS "WHEN THESE OPERATIONS CAN ONLY BE EXPECTED TO CONTINUE TO GENERATE CONTINUING LOSSES, AND ARE NOT ESSENTIAL TO THE COMPANIES' OVERALL VIABILITY, " SORGENTI TOLD THE PANEL.

STATEMENTS. THE MANAGEMENT TEAM WAS CONFIDENT THEY COULD ACHIEVE THE FORECASTED RESULTS AS LONG AS THEY COULD HAVE CONTROL OF THE BUSINESS.

ONE OF THE PLANTS IN THE PREVIOUSLY MENTIONED FINANCIAL STATEMENTS PRESENTED TO OUR LENDERS IS A BUTADIENE PLANT. EVEN WITH ALL OF THE COST REDUCTION PROGRAMS IN EFFECT, THE PROJECTED INCOME FOR THE CURRENT YEAR IS $879,000 BEFORE TAXES. IF THE PROPOSED BILL (S.2892) BECOMES LAW (INCREASING CHEMICAL FEEDSTOCK TAXES UNDER OPTION I PROPOSED BY THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS, JUNE 29, 1984 (COPY ATTACHED)), THIS PLANT WILL HAVE ADDED EXPENSES OF $1,741,000 ANNUALLY, CHANGING THE PROJECTED INCOME OF $879,000 TO A LOSS OF $862,000. WE CANNOT CUT ANY MORE EXPENSES AT THIS PLANT WITHOUT SHUTTING IT DOWN AND CEASING OPERATIONS. NEEDLESS TO SAY, WE CANNOT PAY OFF A LOAN WITH LOSSES OR SHUT DOWN PLANTS. WE ALSO HAVE OTHER PLANTS IN SIMILAR SITUATIONS THAT USE AND MANUFACTURE ETHYLENE, PROPYLENE, STYRENE AND USE OTHER S.2892 LISTED CHEMICALS.

DURING MARK UP, JUNE 20, 1984 BY THE HOUSE COMMITTEE ON ENERGY AND COMMERCE, CONGRESSMAN TAUZIN INTRODUCED AN AMENDMENT TO HR 5640 WHICH WOULD REDUCE THE TAX ON CERTAIN LISTED CHEMICAL FEEDSTOCKS. IN SUPPORTING THE TAUZIN AMENDMENT, CONGRESSMAN FIELDS EMPHASIZED THAT IN THE LAST TWO YEARS 50,000 JOBS HAVE BEEN LOST IN THE PETROCHEMICAL INDUSTRY. BOTH CONGRESSMEN STATED THAT IMPOSITION OF THE PROPOSED INCREASES IN TAX ON CERTAIN LISTED SUBSTANCES WOULD VIRTUALLY DESTROY SMALL REFINERIES WHICH WOULD EXPERIENCE EXORBITANT TAX INCREASES. THIS HAS BEEN REITERATED DURING RECENT SENATE HEARINGS. LET ME SAY THIS

SUPERFUND REAUTHORIZING LEGISLATION BEING CONSIDERED IN THE HOUSE WOULD INCREASE TAX RATES BETWEEN 300 AND 600 PERCENT FOR PRODUCERS OF THE 11 CHEMICAL FEEDSTOCKS WHICH ARE CURRENTLY SUBJECT TO THE SUPERFUND TAX, SORGENTI SAID.

THE ARCO OFFICIAL WAS REFERRING TO HR 5640, A BILL TO REAUTHORIZE THE SUPERFUND LAW, WHICH WAS APPROVED MAY 23 BY THE HOUSE ENERGY AND COMMERCE SUBCOMMITTEE ON COMMERCE, TRANSPORTATION, AND TOURISM. THE BILL WOULD INCREASE THE CURRENT $1.6 BILLION FUND TO $9 BILLION OVER FIVE YEARS, WITH THE BULK OF THE INCREASE DERIVED FROM AN EXPANDED TAX ON CHEMICAL FEEDSTOCKS.

"THE LEGISLATION'S SPONSORS HAVE APPARENTLY ASSUMED THAT THE PETROCHEMICAL INDUSTRY CAN CONTINUE TO BEAR APPROXIMATELY TWO-THIRDS OF AN EXPANDED ANNUAL REVENUE OBJECTIVE OF $1.5 BILLION OR SO. UNFORTUNATELY, THAT ASSUMPTION IS ERRONEOUS," HE SAID.

PROFIT MARGINS ARE DOWN IN THE CHEMICAL INDUSTRY, WHICH OPERATED AT A LOSS IN 1982 AND 1983, SORGENTI SAID. FURTHER, THE SUPERFUND TAX, WHICH APPLIES ONLY TO DOMESTIC PRODUCTION, WILL UNDERCUT THE U. S. CHEMICAL

INDUSTRY'S POSITION IN WORLD MARKETS, HE SAID.

LET ME ASSURE YOU THAT WHEN SUCH LARGE INTEGRATED AND DIVERSIFIED PRODUCERS AND MANUFACTURERS AS ARCO SAY IT IS "UNREALISTIC" FOR THEIR CHEMICAL OPERATIONS TO BE EXPECTED TO CONTINUE TO OPERATE AND GENERATE LOSSES WHEN THEY HAVE OTHER PROFITABLE OPERATIONS TO OFFSET SUCH LOSSES, IT IS TRULY UNREALISTIC TO THINK THE SMALL CHEMICAL PRODUCERS AND MANUFACTURERS SUCH AS EMPLOYEE OWNED EL PASO PRODUCTS COMPANY CAN SURVIVE WHEN THIS IS THEIR ONLY OPERATION.

EVEN IF THE LARGE MANUFACTURERS SURVIVE THE PROPOSED TAX INCREASES AND MANAGE TO OFFSET CHEMICAL LOSSES WITH PROFITS FROM OTHER OPERATIONS, WE QUESTION THE INFLATIONARY IMPACT WHICH RESULTS FROM THE COMPOUNDING AND ADDITIVE EFFECT OF SUCH PRICE INCREASES BY PRIMARY INDUSTRIES BEING PASSED ON THROUGH VARIOUS VALUE-ADDED MANUFACTURING STEPS. THIS NATION CANNOT STAND ANOTHER SPIRAL OF UNCONTROLLED INFLATION.

WE ARE NOT TOTALLY AGAINST ENVIRONMENTAL TAXES AND CONTROLS ON DISPOSAL OF HAZARDOUS WASTE CHEMICALS. WE DO SUPPORT AND WILL CONTINUE TO SUPPORT LEGISLATION AND ENVIRONMENTAL LAWS WHICH ARE PRUDENT AND PENALIZE THOSE WHO WOULD HAPHAZARDLY DISPOSE OF HAZARDOUS WASTE CHEMICALS WHICH POLLUTE OUR ENVIRONMENT AND JEOPARDIZE THE HEALTH OF THE AMERICAN PUBLIC. HOWEVER WE ARE STRONGLY OPPOSED TO ANY LEGISLATION WHICH WOULD PENALIZE AMERICAN BUSINESS FOR PURCHASING AND MANUFACTURING A BASIC PRODUCT USED IN SO MANY THINGS FROM BREAD WRAPPERS TO AUTOMOBILE PARTS AND CLOSE DOWN LEGITIMATE BUSINESS FOR THE ACTS OF A FEW. WHY NOT PUT THE

BURDEN DIRECTLY WHERE IT BELONGS? ON THE WASTE END AND THE DISPOSER.

FOREIGN COMPETITION ON OUR FINISHED PRODUCTS IS ALREADY SO GREAT AS TO CAUSE MANY COMPANIES TO SHUT DOWN AND CLOSE UP THEIR OPERATIONS AS A RESULT OF SUBSIDIES BY FOREIGN GOVERNMENTS. IT IS IRONIC THAT FOREIGN GOVERNMENTS APPEAR TO SUBSIDIZE CERTAIN FOREIGN MANUFACTURING PROCESSES EXPORTING THEIR COUNTRY'S PRODUCTS, WHILE OURS PENALIZES THROUGH UNNECESSARY TAX BURDENS. THEN OUR GOVERNMENT WONDERS WHY OUR BALANCE OF PAYMENTS GET OUT OF LINE AND U. S. INDUSTRY IS UNABLE TO COMPETE IN WORLD MARKETS. IT SHOULD BE NOTED THAT THE CHEMICAL INDUSTRY IS ONE OF THE VERY FEW THAT HAS, OVER THE LAST SEVERAL YEARS CONTRIBUTED A POSITIVE BALANCE OF PAYMENTS. IF YOU TAX US SO AS TO MAKE US UNABLE TO COMPETE WORLD WIDE, YOU KNOW WHAT THE RESULTS WILL BE. NOT ONLY WILL THE BALANCE OF PAYMENTS REVERSE FOR THE CHEMICAL INDUSTRY, BUT YOU WILL HAVE SUCCEEDED IN CLOSING UP AND SHUTTING DOWN MANY SMALL COMPANIES AS WELL AS SOME LARGE COMPANIES' OPERATIONS AND CREATED JOBLESS WORKERS. WE ARE NOT SO SURE YOU MAY NOT ALSO CAUSE THE FEW REMAINING MAJORS TO CEASE OPERATIONS.

SMALL COMPANIES LIKE OURS ARE NOT PRICE SETTERS AND WE CANNOT PASS ON ALL OF THESE COSTS TO OUR CUSTOMERS. OUR COMPANY OPERATIONS ARE WORKING ON A VERY THIN MARGIN. IF A TAX INCREASE ON FEEDSTOCKS PASSES, SOME OF OUR PLANTS WILL SHUT DOWN AND THE EFFECT COULD VERY WELL MEAN THE SURVIVAL OF THIS COMPANY AND 1,200 EMPLOYEES' FUTURE. AS PREVIOUSLY STATED, WE CANNOT SERVICE OUR DEBT WITH SHUT DOWN PLANTS. WE AND OTHERS HAVE TRIED VERY HARD TO SUCCEED IN OUR ENDEAVORS AND ATTEMPTS TO SAVE JOBS

AND BE GOOD CORPORATE CITIZENS. WE ASK YOUR SUPPORT IN THIS ENDEAVOR TO SAVE JOBS AND KEEP OUR AMERICAN INDUSTRY COMPETITIVE IN WORLD MARKETS. DESIGN AND PASS LEGISLATION WHICH WILL NOT BURDEN LEGITIMATE BUSINESS BUT WILL APPROPRIATELY PENALIZE THOSE WHO DO WRONG. PUT THE TAX WHERE IT BELONGS, ON THE WASTE END AND DISPOSER. DON'T IMPOSE UNDUE TAXES ON OUR CHEMICAL FEEDSTOCKS AND CLOSE DOWN EL PASO PRODUCTS COMPANY AND OTHER SMALL BUSINESSES.

STATEMENT OF
THE FLEXIBLE PACKAGING ASSOCIATION
BEFORE THE COMMITTEE ON FINANCE
UNITED STATES SENATE
ON SUPERFUND REAUTHORIZATION

SEPTEMBER 25, 1984

The Flexible Packaging Association (FPA) hereby submits its views on the subject of Superfund reauthorization. FPA is a non-profit trade association representing manufacturers of flexible packaging and suppliers of materials and services used to manufacture such packaging.

Flexible packaging is produced from paper, plastic or cellulose films, aluminum foil or a combination of such materials. It is used to store, protect and display all kinds of fresh, processed or prepared foods and other products. It ranges from simple paper over-wraps and plastic bread bags to sophisticated composite-material pouches in which foods can be directly sterilized and processed. Flexible packaging sales annually approaching $10 billion, nearly 80% of which represents sales by FPA members.

A substantial portion of flexible packaging consists of plastic film products which are derived from petrochemicals. In addition, in the fabrication of flexible packaging the industry uses large amounts of solvents which, when discarded, are generally classified as hazardous wastes.

On a number of occasions, the flexible packaging industry has demonstrated its commitment to the goals of our country's environmental laws, including in particular, the Clean Air Act. Accordingly, we favor an effective national program to clean up problem waste sites, and we support the reauthorization of Superfund.

We believe, however, that the funding levels contained in existing Superfund bills--H.R. 5640 and S. 2892--are far too high. H.R. 5640 would raise on an annual basis more than $2 billion in taxes, and S. 2892 would raise $1.5 billion. Yet data provided by EPA, including testimony before Congress by EPA officials, indicates the agency can effectively use about $1 billion a year to carry out the program. EPA Assistant Administrator Lee M. Thomas so stated in testimony before the House Ways and Means Committee on July 25, 1984 and before the Senate Environment and Public Works Committee on September 12, 1984. His statements are also supported by data contained in an EPA study entitled "Superfund Task Force Preliminary Assessment," dated December 8, 1983. Accordingly, we urge that the funding level in any law which is enacted on this subject be reduced to the level suggested by EPA.

There is another critically important reason why the funding of the Superfund should be carefully limited to the lowest level needed to carry out the program. As noted above, the flexible packaging industry is a major user of plastic materials which are produced from petrochemicals. The cost of the Superfund tax is therefore passed on to our industry's firms and in turn to their customers. Yet foreign competitors purchase non-taxed raw materials and thus do not bear this burden. To that extent they enjoy a competitive advantage over U.S. flexible packaging producers.

Because of the adverse economic impact Superfund has on our industry, and on the chemical industry in general, we believe that a substantial part of the funding--up to one-half--should be paid for out of general federal revenues. This would substantially alleviate what we consider to be an undue tax burden and would assist in causing our domestic producers to be more competitive with their foreign counterparts.

Lastly, FPA believes that the question of public compensation for chronic diseases is a very serious subject that should be examined separately from Superfund. The Superfund law was designed to clean up waste sites. Adding other programs to the law would only complicate and delay the clean-up.

In conclusion, we ask that this statement be made part of the record at the hearings in this matter. We would be happy to supplement these views with any additional data the Committee may desire.

FOOTE MINERAL COMPANY

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STATEMENT OF FOOTE MINERAL COMPANY
BEFORE THE
SENATE COMMITTEE ON FINANCE
SUPERFUND REAUTHORIZATION HEARING
REGARDING
LITHIUM CARBONATE

September 21, 1984

My name is Dr. Richard N. Jacobson and I am the Vice President and General Manager of the Chemicals and Minerals Division of Foote Mineral Company. Foote Mineral Company is one of the two producers of lithium carbonate in the United States. Foote produces lithium carbonate at two facilities - Kings Mountain, North Carolina and Silver Peak, Nevada. Foote's production of lithium carbonate in 1983 totalled 23,720,000 pounds, representing approximately 50% of total U.S. production for that year. The U.S. consumes about one-half of the world's annual production of lithium and is self-sufficient in this commodity.

I appreciate the opportunity of having my statement regarding lithium carbonate be made part of the Committee's record of the reauthorization of Superfund.

Foote Mineral Company strongly supports the Superfund program and its high priority of protecting the public health from immediate and long-term dangers associated with the improper management of hazardous waste. Furthermore, Foote Mineral Company recognizes the need for an expanded Superfund to accomplish the critical task of cleaning up abandoned waste sites thoroughly and expeditiously. However, expansion of the current feedstock tax program should be carefully considered in light of scientific data to assure that revenues raised come from those substances posing a danger to the public health. Lithium carbonate is not one of those substances.

What is Lithium Carbonate?

Lithium carbonate is the single largest lithium chemical consumed throughout the world. Lithium carbonate is produced directly from lithium ore (spodumene which is a mineral composed of lithium oxide, silica and alumina) and from naturally occurring brines containing dissolved lithium chloride. In the United States Foote Mineral Company produces lithium carbonate from spodumene mined in North Carolina and from subsurface brines in Nevada.

Most lithium ore is converted to lithium carbonate which is then used to produce lithium chemicals and metal. Lithium in its various forms is so versatile it is impossible to discuss all of its uses in detail, but a few of its more significant applications should be mentioned.

Lithium carbonate is not a designated substance under present Superfund law (CERCLA Section 101[14]). EPA has not listed lithium carbonate as a hazardous substance under the Clean Water Act, and it is not a hazardous substance according to the tests established by the EPA under RCRA. No lithium compound appears in the hazardous chemicals list of 40CFR122 Appendix D; or 40CFR261.31 - 261.33; or 40CFR712.30; these represent respectively the original "Toxic Pollutant" list, the Toxic Substances Control Act list of hazardous wastes and the CERCLA required reporting list. (A lithium carbonate derivative - lithium chromate - is a designated hazardous substance under CERCLA because of its chromate, not lithium, content. Chromium and chromite are already taxable substances under the current Superfund law.)

Lithium carbonate is approved for medical treatment of approximately 100,000 people per year in the U.S. by the National Institutes of Health.

Lithium Carbonate Should Not be Included in a Feedstock Tax Under Superfund.

Lithium carbonate is not a hazardous material and does not fit the criteria used to determine which substances should be included in the Superfund program. Waste by-products from lithium carbonate production are few and non-hazardous.

The studies to date by the EPA and the various states regarding the content of the presently recognized hazardous waste sites show that no lithium salt is known to have been cited as a contributor to a hazardous waste situation.

Specifically, lithium carbonate has not been found in either its raw, intermediate or final product form at any Superfund site. No hazardous wastes linked to lithium carbonate have been found at any site listed on the National

Major end-use markets for lithium carbonate are the aluminum industry (for smelting of alumina to aluminum), and the glass and ceramics industries. Lithium carbonate is used as a flux in both porcelain enamel and standard glass formulations to reduce energy consumption and increase production rates. It is widely used to produce bathroom fixtures, kitchen appliance coatings and electrical insulators.

The pharmaceutical industry provides another important market. Lithium metal is used in the synthesis of Vitamin A. Lithium carbonate, in its pure form, has been effective in treating manic-depressive mental disorders and alcoholism.

During 1983, lithium metal was tested in a new high-strength, low-weight aluminum alloy by the aircraft industry. It has been estimated that such alloys could eliminate up to 14,000 pounds of weight from the largest of commercial airplanes, with an estimated savings of 4 million gallons of jet fuel over its operating life. Lithium metal in its pure elemental form is a soft silvery white alkali metal, similar to the better known metals sodium and potassium.

Other lithium compounds are used by the air conditioning, lubricant, synthetic rubber, welding and brazing and primary battery industries.

Is Lithium Carbonate a Hazardous Substance?

Lithium carbonate and its intermediate and final products are not hazardous substances.

Priority List. (It should be noted that tritium, a remote derivative of lithium carbonate, was found at a single site out of the more than 800 sites investigated by EPA, and this site is not on the National Priority List. Tritium, a radioactive hydrogen, is a product of the nuclear industry, not the chemical industry. Furthermore, the quantity of lithium carbonate used in tritium production represents a minute portion of total U.S. production of lithium carbonate.)

Lithium carbonate has significant solubility in water. Lithium chemicals are relatively expensive, and neither a manufacturer nor a user can afford to put any significant quantity of concentrated lithium chemicals into a waste disposal. Production of lithium carbonate and its intermediate and final products does not generate any significant quantity of hazardous waste - one of the criteria for listing as a feedstock for the purposes of a Superfund tax.

In August, the House of Representatives passed its version of a Superfund reauthorization bill, H.R. 5640. Although lithium carbonate is not on the current CERCLA feedstock list, the House bill places a tax on lithium carbonate at $30 per ton per year, the highest tax rate in the bill. The total revenues raised by taxing lithium carbonate represent less than 0.1 percent of the total raised by feedstocks under the House bill, yet the proposed tax represents the equivalent of nearly $1,000 per employee per year for the domestic lithium industry.

The House proposed tax on lithium carbonate could have serious adverse impacts on the domestic industry, affecting employment in several states and putting the domestic lithium carbonate industry at a competitive disadvantage in the world market. Apart from the United States, the only other producers of lithium carbonate in the world are the USSR, People's Republic of China and Chile.

Currently, the United States produces the dominant supply of the world's lithium chemicals. A Superfund tax on lithium carbonate would affect this position, and place an enormous economic burden on the domestic industry.

Conclusion

The original intent of the Superfund law was to tax feedstocks which produce significant environmental impact. Therefore, since lithium carbonate does not meet the definition of a hazardous substance contained in any current law and since lithium carbonate has not been identified in any hazardous waste site, it can be concluded that lithium carbonate should not be included in any list of taxable feedstocks under CERCLA.

Foote Mineral Company respectfully asks that the Senate Finance Committee carefully consider the facts contained herein when recommending a feedstock tax base for the reauthorization of Superfund, and retain the present list of taxable substances - a list which rightfully does not include lithium carbonate.

FOOTE MINERAL COMPANY

Richard N. Jacobson, PhD
Vice President and General Manager
Chemicals & Minerals Division

RNJ:jme

Highway
Users Federation
FOR SAFETY AND MOBILITY

OFFICE OF THE PRESIDENT

September 19, 1984

The Honorable Robert Dole
Chairman
Senate Committee on Finance
U.S. Senate
Washington DC 20510

Subject: Superfund Financing -- September 19, 1984
Hearing Record

Dear Mr. Chairman:

We appreciate the opportunity to comment on the Superfund financing options before the Committee. We hope our comments will be incorporated into the formal hearing record.

We oppose financing Superfund with a transportation tax. Such a tax would further disrupt the well-established and accepted linkage of highway user taxes to road purposes. A transportation tax for general fund pruposes, such as Superfund, would effectively preempt the funding source that since 1919 has been largely reserved for highways. At present, state and federal motor fuel taxes enjoy public support because they are perceived as user charges for the construction and upkeep of our nation's roads and are dedicated to highway trust funds for that purpose.

Evidence of public support for highway-earmarked fuel taxes can be seen in the states. Contrary to the pattern of state tax limitation in recent years, state highway user charges have been widely and substantially increased to deal with serious road problems. In the coming years, states will seek further fuel tax increases to match increased federal road funding. So far, 33 states and the District of Columbia have passed motor fuel tax increases to match the 1983 "nickel-a-gallon" federal tax increase.

1776 Massachusetts Avenue, N.W., Washington, D.C. 20036 (202) 857-1200

Taxes that undermine dedicated highway user charges will create long-term problems for America's highway transportation and economic vitality. We can't have a first - class economy with a second-class road system. Highway user charges should continue to be reserved for roads.

Sincerely,

Peter G. Koltnow

Peter G. Koltnow

cc: Senate Committee on Finance

Statement For The Record

By

Howard J. Hoffman

On

Proposals For Financing Superfund

Senate Committee on Finance

September 19, 1984

WORKABILITY OF THE WASTE-END TAX

Statement For the Record By Howard J. Hoffman */

I am a tax attorney in private practice in Washington, D. C., and I have an interest in environmental excise taxes. I submit this statement solely on my own behalf, and not on behalf of my law firm or any institution or client.

The purpose of this statement is to review the workability of the waste-end tax. This statement does not take a position on whether a waste-end tax should be adopted. If a waste-end tax is adopted, I believe it can be devised to be fairly workable. Nevertheless, the tax is likely to be complex in many respects, and it raises certain administrative and enforcement concerns. The present legislative proposals raise a number of technical issues for which further study is advisable.

The following is a summary of my present views on the workability of the waste-end tax. It must be emphasized that the conclusions stated herein are tentative and subject to further study. A more detailed discussion of the technical issues, in the form of an outline/issues list, is attached hereto.

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*/ Address: 1775 K Street, N. W., Fourth Floor, Washington, D. C. 20006. Telephone: (202) 835-7300.

Elements of the Waste-end Tax.

There are numerous legislative proposals for a waste-end tax. The more recent ones include (i) a proposal by Rep. Conable, (ii) a proposal by Rep. Wyden, (iii) a proposal by Rep. Breaux, and (iv) S. 2959.

The proposals are similar in many respects. In general, under the proposals, the tax would be levied on hazardous waste that is subject to the recordkeeping and reporting requirements of Subtitle C of the Solid Waste Disposal Act ("SWDA Subtitle C"), if such hazardous waste is disposed of or otherwise managed in specific ways (primarily land disposal and storage for longer than one year). The taxpayers would include the waste management facilities and persons who illegally dispose of the waste.

Under the proposals, the tax would be closely tied to the requirements of SWDA Subtitle C. The waste-end tax is in large part an environmental measure, and the elements of the tax are imbued with determinations as to environmental policy.

Workability of the Waste-end Tax.

To a significant extent, the proposals, with some revisions, would result in a workable waste-end tax. In general, the substances that would be subject to tax are easily identifiable. In addition, to a large extent, the waste management methods that would give rise to the tax also are fairly easily identifiable, such as disposal in landfills and underground injection wells. Moreover, the great bulk of hazardous waste is managed by no more than a few thousand facilities. As a result, for the great bulk of hazardous waste, the number of taxpayers would be relatively small.

Nevertheless, the tax is likely to carry complexity, primarily because the hazardous waste industry and hazardous waste laws are complex. The degree of complexity would depend in part on determinations as to environmental policy. The more the tax is tailored to provide precise waste management incentives, the more complexity may result.

In addition, significant issues concerning workability have arisen and should be studied. Some of the more troublesome issues involve (i) the determination as to which waste management methods should and should not be subject to tax, and (ii) the ability of the I.R.S. to administer and enforce the tax in a cost-effective manner.

With a collaborative effort by Government, industry, the bar, and other interested parties, I believe that these issues can be resolved in a satisfactory manner. The effort should be undertaken with the understanding that taxation is difficult, and that the waste-end tax is bound to be imperfect. The Treasury Department, if its resources permit, should be requested to begin at this time a study of the workability of the waste-end tax, even if Superfund reauthorization is not enacted this year.

The following is a summary list of some of the principal issues that should be studied. These issues are discussed in greater detail in the attached outline/issues list.

A. Taxable Items.

1. Would reliance on E.P.A. regulations under SWDA Subtitle C for the definition of "hazardous waste" create any problems for the I.R.S., the E.P.A., or taxpayers?

2. What issues arise from the fact that the States generally will administer SWDA Subtitle C, and thus will control to some extent the definition of "hazardous waste"?

3. As a technical matter, to assure that the tax remains consistent with SWDA Subtitle C, should the tax be levied on hazardous waste that is subject to the SWDA Subtitle C recordkeeping or reporting requirements, or on hazardous waste that is required to be disposed of under SWDA Subtitle C?

4. What degree-of-hazard approach, if any, based on the hazardousness of the waste, should be adopted over (i) the short term and (ii) the long term?

5. Should the tax be levied on a wet-weight or a dry-weight basis?

6. How should the addition of nonhazardous substances to hazardous waste be treated for tax purposes?

7. What revisions would be necessary to the SWDA Subtitle C recordkeeping provisions to support a tax?

B. Taxable Activities.

1. How best to account for hazardous waste that is placed in, and removed from, storage for longer than one year ("long-term storage")?

2. Should waste that is placed in long-term storage be taxed on the basis of (i) the amount initially stored or (ii) the amount remaining after storage, *i.e.*, how to treat shrinkage that may occur during storage due to evaporation, leachate, etc.

3. If waste is moved from one storage facility to another, should the storage time for each storage facility be added together in applying the tax on long-term storage?

4. Should waste in storage at the time the tax takes effect be grandfathered?

5. Should a credit (or exemption) be granted for waste that is placed in long-term storage and subsequently managed in a nontaxable manner?

6. If waste is to be subject to tax upon disposal or long-term storage, but not upon treatment, how best to (i) resolve ambiguities over the definition of treatment, and (ii) prevent avoidance of the tax through the use of long-term treatment methods that in substance are comparable to long-term storage?

7. Some have proposed to resolve the treatment issue identified immediately above by taxing hazardous waste placed in a treatment process for more than one year in the same manner as

hazardous waste placed in storage for more than one year. If this proposal is adopted, many of the same technical issues will arise as under the long-term storage tax. Additional issues may also arise, such has how best to account for recycled liquids.

8. How should hazardous residues be treated for tax purposes?

9. What concerns would arise if taxpayers attempt to avoid the tax on hazardous waste by shifting to nontaxable disposal or treatment methods, such as disposing of waste in rivers or destroying waste in industrial boilers?

10. Should treatment methods be subject to tax until they are issued a final permit by the E.P.A. or the States?

11. Should special exemptions from tax be granted for certain treatment or disposal methods?

12. What degree-of-hazard approach, if any, based on the hazardousness of the waste management method should be adopted over (i) the long-term and (ii) the short-term?

13. Should waste be subject to double taxation (e.g., should waste subject to tax because placed in long-term storage be subject to tax upon disposal), and if not, how best to prevent double taxation?

14. For informational reporting purposes, should taxpayers be required to provide the I.R.S. with information concerning all waste that is managed, including waste not subject to the tax?

15. Should tax be imposed upon the receipt of waste by a waste management facility, or upon the taxable management of the waste?

16. What issues arise from the fact that the States generally will administer SWDA Subtitle C, and thus will control to some extent regulation of hazardous waste management?

C. Taxpayers.

1. Should the tax be levied only on waste management facilities, or also on waste generaters or transporters who dispose of waste illegally?

2. What issues arise from the fact that States generally will administer SWDA Subtitle C, and thus will control to some extent the determination of which persons may become taxpayers?

3. Should the tax incorporate mechanisms to assure that the taxpayer passes the tax on to the waste generator?

4. What issues arise from the fact that State and local governmental units may become taxpayers?

D. Administration and enforcement.

1. Would the tax increase illegal waste disposal?

2. To what extent would illegal waste disposal reduce the workability of the tax?

3. Should E.P.A. administer and enforce the tax?

4. If the I.R.S. administers and enforces the tax, what resources and personnel would the I.R.S. require, in what manner

should the I.R.S. audit, and to what extent could the I.R.S. rely on other agencies for enforcement assistance?

E. State Taxes.

1. Should a Federal waste-end tax be coordinated with state taxes by providing a credit against the Federal tax for state taxes paid?

2. What light is shed on the workability of the tax by the States' experiences with hazardous waste taxes?

STATEMENT OF
INLAND STEEL COMPANY
SUBMITTED TO THE
COMMITTEE ON FINANCE
OF
THE UNITED STATES SENATE
ON SUPERFUND TAXES

October 3, 1984

This statement is submitted by Inland Steel Company ("Inland" or "the Company"), an integrated steel business headquartered in Chicago, Illinois.

The Company

Inland employs approximately 29,000 men and women. In raw steel production, it is the fifth largest steel company in the United States. Until 1981, Inland was, for many years, among the most profitable of the steel companies. Starting with the fourth quarter of 1981, Inland incurred losses for nine consecutive quarters; losses amounted to $1[illegible]7 million in 1982 and $119 million in 1983.

The Company's steel operations are located at its Indiana Harbor Works in East Chicago, Indiana. That mill is the nation's largest steel plant and during 1984 employed approximately 20,000 workers with the mill operating at about 80 percent of capacity.

Legislative Status of Superfund Reauthorization and the Waste End Tax

Inland understands the concern and need for legislation to reauthorize the tax provisions of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), which expires on September 30, 1985. Meritorious arguments have been propounded both by those urging reauthorization during this session of Congress, and by those who desire to defer reauthorization until next year, after the receipt of Congressionally mandated studies from the Environmental Protection Agency ("EPA"). Whatever the timing of the reauthorization legislation, Inland opposes any attempts to penalize environmentally sound disposal methods, and parties who are not responsible for the creation of disposal site cleanup problems, by financing the Hazardous Substance Response Trust Fund ("Superfund") with a tax on deep well injections.

The House Energy and Commerce Committee version of the Superfund reauthorization bill, H.R. 5640 (H. Rept.

98-890, Part 1), contained the initial proposal for a new disposal ("waste end") tax that would be collected from the owners or operators of disposal facilities to supplement the existing feedstock tax. However, the House Committee on Ways and Means decided not to impose a waste end tax pending further study of the issue. The Ways and Means Committee rejected immediate adoption of a waste end tax for several reasons: arguments over the difficulty of administering a disposal tax; the possible disincentive effect of the tax; the instability of revenues from a disposal tax; how the tax should be imposed, e.g., on a "wet" or "dry" basis; and the trade ramifications of a disposal tax. (See JOINT COMMITTEE ON TAXATION, BACKGROUND AND ISSUES RELATING TO THE REAUTHORIZATION OF SUPERFUND, JCS-34-84 (Committee Print, September 17, 1984) for a further discussion of these arguments.) Thus, the bill as passed by the House does not contain a waste end tax, but instead directs the Department of the Treasury, in consultation with the Environmental Protection Agency, to develop by April 1, 1985, a legislative proposal for such a tax.

Currently, the Superfund bill is before the Senate, where the Senate Committee on the Environment and Public Works has reported S. 2892 (S. Rept. 98-631), which would extend the Superfund program for five years at a total cost of $7.5 billion. S. 2892 does not contain specific revenue proposals, since the Committee on the Environment and Public Works has deferred to the jurisdiction of the Committee of Finance.

A Waste End Tax on Deep Well Injections Should Be Rejected

Adoption by the Senate of any waste end tax prior to the development of the legislative proposal required from Treasury by April 1, 1985, would be premature. In any event, a tax on deep well injections should be rejected. It is bad environmental and tax policy, since it would operate as an environmental and economic disincentive and would not augment revenues. A waste end tax on deep well injections would unwarrantably penalize Inland Steel Company, even though they utilize a sound disposal method and are not responsible for creating the disposal site cleanup problems that the Superfund attempts to address.

Disposal of Waste Pickle Liquor and Rinse Water Mixture by Deep Well Injection

Inland Steel Company has successfully operated an environmentally sound Class I deep injection well since 1967 at its Indiana Harbor Works steel plant. The well is used to dispose of a mixture of waste pickle liquor, an acidic hazardous substance, and cascade acid rinse water in compliance with EPA promulgated underground injection regulations. Inland currently has two Class I deep injection wells. The Company operates one well at a time, maintaining the second as a backup system.

Inland utilizes the pickling liquor in processing flat rolled steel. A mixture of water and acid, usually hydrochloric or sulphuric acid, is used to bathe or pickle the hot rolled flat steel for purposes of removing rust, oxide and other impurities. As a further cleansing procedure, Inland has instituted a "cascade rinse" process whereby the hot rolled flat steel is then rinsed with progressively cleaner tanks of water. The residue from the pickling process, primarily consisting of dissolved iron, residual acid and water, constitutes the waste pickle liquor. At Indiana Harbor Works, Inland disposes of the waste pickle liquor, along with the cascade rinse water mixture, by injecting them into one of their Class I underground deep injection wells.

The disposal of substances in a deep well is done in strict compliance with EPA promulgated underground injection regulations. The waste is injected into a subsurface natural geographical formation of porous sandstone, which is capped with impervious shale and underlaid with granite. Fiberglass injection tubing is surrounded by a pressurized inert fluid (which pressure is monitored) to prevent leakage from a Class I acid injection well. The design, construction, operation, monitoring and closure of the deep injection wells are regulated under the Safe Drinking Water Act and the Resource Conservation and Recovery Act ("RCRA"). Stringent underground injection regulations were recently promulgated by EPA, and became effective on June 25, 1984. These regulations ensure that wastes are injected only into underground formations having the natural ability to confine the wastes, and that the wells are constructed, operated, maintained, and closed in a manner designed to prevent leakage of waste out of the containment zone.

Deep Well Injection Is Environmentally Preferable

Deep well injection is a more environmentally sound disposal technique than surface disposal mechanisms. Properly designed deep well disposal facilities, such as Inland's Class I wells, involve no discharge of waste into the environment. With deep well disposal, the hazardous substance is injected over 4,000 feet beneath the surface. The hazardous waste is thus permanently contained at a level which is far below the lower-most underground source of drinking water.

To the contrary, surface disposal of hazardous wastes, such as landfills, no matter how carefully designed, almost always involves some discharge into the environment that may ultimately be determined to be detrimental or even hazardous. At least three independent reports have confirmed that deep well injection is environmentally more desirable than landfills as a mechanism for disposal of hazardous substances: a 1980 report by the Comptroller General of the United States entitled "Hazardous Waste Dispoal Methods: Major Problems With Their Use;" a 1973 report by the Bureau of Mines Division of the Department of the Interior on "Subsurface Disposal of Pickle Liquor;" and a Texas Environmental Coalition report that was published in 1983.

There are now over 500 EPA National Priority Sites designated for cleanup under CERCLA and the Superfund mechanism. None of these sites is a Class I underground injection well. The imposition of a Superfund tax on deep well injection would be bad environmental policy, imposing a penalty on companies such as Inland that have voluntarily adopted an environmentally sound disposal technique.

A Tax on Deep Well Injections Would Exact an Unwarranted Penalty

A tax on deep well injections would impose a financial burden on companies such as Inland that were not responsible for creating the disposal site cleanup problems addressed by the Superfund program. At the rates contained in some proposals, Inland's unwarranted tax penalty would be substantial. Inland's deep well injection of waste pickle liquor and rinse water involves a solution that is 96% water, 3% inert (nonhazardous) material and 1% acid. Thus, at a rate of $5 per "wet weight" ton, Inland's deep well injections of approximately 500,000 tons per year (96% of which is water) would result in an annual Superfund tax liability of approximately $2.5 million. Even at a rate of $50 per "dry weight" ton, the Company's annual tax liability would be approximately $1 million.

Tax on Deep Well Injections Would Discourage Sound Environmental Practices and Would Not Augment Revenues

One of the arguments put forth by the proponents of a waste end or disposal tax is the need for additional and more stable sources of revenue. In Inland's case, this argument is totally counter-productive.

Although deep well injection is the most environmentally sound method of disposal of waste streams such as the waste pickle liquor and rinse water mixture, the decision whether to use deep wells or some less desirable disposal method would be an economic one for the company involved. Currently, deep wells are the most cost efficient method of disposal for many companies. A significant tax on underground injections would alter the comparative cost analysis and cause certain surface treatment and disposal methods to be more economical. Such promotion of surface disposal is not only contrary to prevailing environmental policy objectives, but would also reduce the amount of revenue expected from the tax.

For Inland, a lime neutralization process would be the alternative to deep well disposal. This process would produce a sludge that would have to be disposed of in a surface landfill, a less desirable approach from an environmental viewpoint. Because the process involves neutralizing the acid, the sludge that is produced would not be subject to tax under the various waste end tax proposals. In addition, there would be non-taxable water discharges containing contaminants, such as calcium chloride, to receiving bodies of water like Lake Michigan. Construction of a new lime neutralization facility would entail a one-time capital expenditure by the Company of approximately $4 million. This one-time capital cost of lime neutralization would be exceeded by the tax cost that would be avoided after only two or three years of non-operation of a deep well under the tax rates being proposed. This tax disincentive would make constructing and operating a sludge-producing lime neutralization facility more economical than continuing deep well injection.

Summary - A Deep Well Injection Tax Should Be Rejected by the Senate as Bad Environmental and Tax Policy

A Superfund tax on the deep well injection method of disposal is bad environmental policy and bad tax policy. The tax would impose a substantial financial burden on companies such as Inland that were not responsible for creating the disposal site cleanup problems addressed by the Superfund. A tax on deep well injections would operate in actuality exactly opposite to the way a good environmental tax should: it would provide incentives for less than optimum practices and would penalize companies such as Inland that adopted the best disposal technique.

Inland Steel Company recommends that the Senate not adopt any waste end tax pending completion of the legislative proposal required from the Department of the Treasury by April 1, 1985, pursuant to the House version of the Superfund reauthorization legislation. If a waste end tax is adopted, environmental and tax policies would be best served by a total exemption from the Superfund tax for deep well injections complying with EPA guidelines

(Class I wells). Absent outright exemption, any tax on Class I deep well injections should be a small fraction of the $5 per "wet weight" ton or $50 per "dry weight" ton rates that some have proposed.

Inland Steel Company
Chicago, Illinois

Written Statement

of

McClaran Jordan

President

of

Kerr-McGee Refining Corporation

To the
Finance Committee
United States Senate

on

Superfund Reauthorization

September 21, 1984

Kerr-McGee Refining Corporation is an independent refiner, with refineries located in Louisiana, Oklahoma and Texas. Its total refining capacity is 154,800 barrels of oil per day, making it one of the largest independent refining companies in the country.

Six points need to be recognized and understood when considering the adverse impact the Superfund Reauthorization legislation, specifically H.R. 5640, will have on the refining industry, and Kerr-McGee Refining in particular.

1. Petroleum refining has not been and is not now a major generator of hazardous waste. Estimates by the EPA and others of refining's share of waste generation range from three to five percent. However, the refining industry is currently providing roughly 15 percent of the revenue now being used to clean up waste sites under Superfund, which is a disproportionately large share. In addition, H.R. 5640 would increase the petroleum tax more than elevenfold, from 0.79 cents per barrel to 9.16 cents per barrel of crude oil processed, and increase the refining industry's contributing share of Superfund to 30%.

   This is an unreasonable increase in the tax burden for the refining industry to shoulder. The tax burden placed upon the industry should parallel the industry's contribution to the waste problems that need to be cleaned up. This tax increase greatly exacerbates the tax inequity that presently is imposed on the refining industry, and does not recognize the full financial responsibility of other industries that generate the majority of the hazardous wastes.

2. Competition in the market place does not now permit passing through to customers the cost of purchasing crude oil and refining petroleum products. It is inequitable to increase the tax burden on independent refiners now struggling to survive in today's marketplace.

   The refining industry and its customers are already excessively taxed. State and local governments have followed Congress' lead in raising fuel taxes last year. The national average of combined federal, state and local taxes on gasoline have been recently estimated near 22¢ per gallon. This is approximately 20% of the retail cost of a gallon of gasoline.

   In recent years, decline in petroleum product demand and resulting excess refining capacity have led to severe competition and elimination of refiners' profit margins. Squeezed between high crude oil prices and prices consumers are willing to pay, the refining business is now operating unprofitably.

   Regulatory requirements in other areas, most notably EPA's effective elimination of lead in gasoline, will require significant capital investment to maintain productive capacity and meet quality requirements. With the nonexistent profit margins now present within the industry, this investment will not occur for many refiners, particularly independent refiners.

3. Through substantial investments of both capital and manpower resources, Kerr-McGee continues to actively participate in the effort to maintain environmental quality. Kerr-McGee's capital and operating expenditures relating to environmental protection have totaled more than $117 million since 1980. Expenditures in the refining area have included approximately $28 million of this total. In recent years, Kerr-McGee has protected the air and water by improving the quality and reducing the quantity of effluents from its refineries. The attached Exhibit 1 is a partial list of environmental projects undertaken by Kerr-McGee Refining. Kerr-McGee will continue to do its share.

   Proposed dramatic increases in the amount refiners must pay to Superfund for waste cleanup, well in excess of any apparent consideration of the amount of wastes generated, fail to recognize past expenditures made by refiners such as Kerr-McGee.

4. As previously noted, the petroleum refining industry is in dire financial straits. Since January 1, 1981 no less than 46 refineries have been shutdown in the state of Kansas, Louisiana, Oklahoma and Texas alone and these shutdowns are continuing in 1984. (See Exhibit 2.) These refinery closings

represent thousands of lost jobs and reduced refining capacity for these states of 1.1 million B/D.

In the event the tax provisions in H.R. 5640 are imposed, the National Petroleum Refiners Association estimates that the following Superfund tax increases will occur for the refiners in the following states:

	Superfund Revenues/yr. Present Law	H. R. 5640 Revenues/yr. Projected	Increase Over Present Law
Kansas	$ 706,000	$ 8,183,000	$ 7,477,000
Louisiana	4,921,000	57,059,000	52,138,000
Oklahoma	1,019,000	11,814,000	10,795,000
Texas	9,742,000	112,963,000	103,221,000

In light of the current market milieu, these tax increases will almost certainly cause more shutdowns of domestic refineries, particularly independents. Consequently, the long-term national security of this country could be threatened by this additional loss of U. S. refineries, refining capacity and jobs.

5. Both the Senate and House have proposed Superfund Reauthorization bills which address leaking underground storage tanks. Underground storage tanks should not be regulated by Superfund, which was enacted to regulate inactive hazardous waste sites.

The issue of possible groundwater contamination from leaking underground storage tanks is now under active consideration by the EPA. While determining the extent of the problem, and evaluating alternatives, the EPA is working with the states and industry to develop voluntary steps to resolve any present problems.

Any effective program to manage underground storage tanks is much more cost efficient than cleaning up discharges from leaking tanks. Kerr-McGee is now budgeting more than $4 million in capital expenditures through 1989 to implement such a program developed in accordance with voluntary industry standards. Until the EPA has completed its evaluation and considered the present regulatory alternatives for addressing the problem, action by Congress on Superfund at this time would be premature and inappropriate.

6. It would be shortsighted and premature for Congress to reauthorize Superfund at this time, when the current act's funding provisions do not expire until late 1985. The EPA is expected to complete its evaluation studies by the end of this year. This information should prove invaluable in assisting the Administration and Congress in forging a viable reauthorization bill. Great caution must be exercised in determining at what level Superfund should be funded. It would be unwise and wasteful for Congress to impose taxes at such a high rate that EPA could not effectively manage and use the additional generated revenue.

It is for the above noted reasons that Congress should not proceed with the reauthorization this year. Congress should proceed with all due deliberation and prudence in reauthorizing Superfund at an appropriate, later time.

EXHIBIT 1
Page 1 of 2

KERR-McGEE REFINING CORPORATION
SELECTED CAPITAL INVESTMENTS
TO CONTROL REFINERY EMISSIONS
1979 - 1984

LOCATION	PROJECT DESCRIPTION	EXPENDITURES THOUSANDS OF $
Wynnewood, OK	Hydrogen Sulfide Control	1,225
	Disposal Well	465
	Waste Water Control Facilities	1,438
	Solid Waste Disposal Facilities	80
	Groundwater Monitoring Wells	97
Cotton Valley, LA	Waste Water Treatment Facilities	206
	Floating Roof Installation in Product Tanks	117
	Flare Relocation To Protect Lake	5
	Waste Water Control	16
Corpus Christi, TX	Hazardous Waste Permit Application For Land Farm	77
	Close Oily Sludge Pits and Install Two 400 Barrel Tanks	115
	Prepare Sulfur Recovery Facilities For Operation	559
	Prepare Diesel HDS for Startup	78
	Install Secondary Floating Roof Seal On Six Tanks	200
	Amine Charcoal Filter For Sulfur Recovery Facilities	115
	Sulfur Recovery Unit Sulfur Truck Loading Rack	13
	Continuous Monitor For Sulfur Recovery Unit Scot Unit	6
	API Separator Covers	47
	Modify Sulfur Recovery Area Oily Water Drain System to Stop H_2S Hazard	11
	Closed Drain System for Sulfur Recovery Unit Sour Water Tank (H_2S Hazard)	10
	Oil Coalescing Filter For Sulfur Recovery Unit Amine System	18
	Install Environmental Lab Facility in Warehouse Building	94
	Install Floating Roof on Tank S-8	68
	Install Additional Re-boiler For Water Stripper	20
	Improve Vapor Recovery System	85

EXHIBIT 1
Page 2 of 2

LOCATION	PROJECT DESCRIPTION	EXPENDITURES THOUSANDS OF $
Corpus Christi, Tx (Cont.)	Install HDS Analyzer on Crude II Unit	19
	Oil Coalescer For Sour Water Stripper	11
	Provide Water Injection for Diesel Unit Overhead Condensers	26
	Replace Data Logging Equipment on Sulfur Recovery Unit	34
	Amine System For Removal of H_2S	700
	Flue Gas Scrubber on FCCU II Unit	2,796
	Merox Unit For Sulfur Removal	795
	Flue Gas Scrubber Effluent Treatment To Reduce Pollution	275

EXHIBIT 2
Page 1 of 2

KANSAS, LOUISIANA, OKLAHOMA AND TEXAS REFINERY SHUTDOWNS SINCE JANUARY 1, 1981

REFINERY	LOCATION	CRUDE DISTILLATION CAPACITY (B/D)
KANSAS		
E-Z Serv Refining Inc.	Shallow Water	9,500
Mid America Refing Co.	Chanute	3,000
Mobil Oil Co.	Augusta	50,000
Phillips Petroleum	Kansas City	80,000
LOUISIANA		
Bayou State Oil Co.	Hosston	3,000
Evangeline RefiningCo.	Jennings	4,500
GHR Energy Corp.	Good Hope	300,000
Gulf Oil Corp.	Venice	28,700
Lake Charles Refining Co.	Lake Charles	28,000
Mallard Resources, Inc.	Gueydan	7,400
McTan Refining Corp.	St. James	19,300
Schulze Processing	Tallulah	1,760
Shepard Oil Co.	Jennings	10,000
Sooner Refining Co.	Darrow	8,000
T & S Refining Co.	Jennings	10,500
OKLAHOMA		
Champlin Refining Corp.	Enid	53,800
Hudson Oil Co.	Cushing	19,000
Oklahoma Refining Co.	Thomas	9,800
Okmulgee Refining Co.	Okmulgee	25,000
Tonkawa Refining Co.	Tonkawa	12,000
Tosco Corp.	Duncan	48,000

EXHIBIT 2
Page 2 Of 2

TEXAS

Adobe Refining Co.	LaBlanca	5,200
Brio Refining Co.	Friendswood	12,500
Bronco Refining Co.	Houston	2,250
Carbonit Refining Co.	Hearne	11,000
Clinton Manges	Palestine	6,000
Capano Refining Co.	Ingleside	11,100
Dow Chemical U.S.A.	Freeport	190,000
Eagle Refining Corp.	Jacksboro	1,800
Erickson Refining Corp.	Pt. Neches	30,000
Independent Refining Corp.	Winnie	50,000
Listo Refining Corp.	Donna	3,500
Longview Refining Co.	Longview	14,000
Petraco-Valley Oil Co.	Brownsville	12,300
Pioneer Refining Ltd.	Nixon	15,000
Placid Oil Co.	Mont Belvieu	8,500
Quitman Refining Co.	Quitman	6,600
Rio Grande Crude Ref.	Brownsville	9,500
Rio Grande Recovery Systems, Inc.	Brownsville	1,000
Sentry Refining Inc.	Corpus Christi	25,000
Shore, Inc.	Kilgore	550
Texas Refining Co.	Midland	2,500
Texas Standard Refining Inc.	Houston	1,800
Thriftway Oil Co.	Graham	1,184
Tipperary Refining Co.	Ingleside	7,320
Wickett Refining Co.	Wickett	8,000

STATEMENT OF R. SARAH COMPTON
COLLIER, SHANNON, RILL & SCOTT
COUNSEL FOR
LTV STEEL CORPORATION AND
CADENCE CHEMICAL RESOURCES, INC.

SUBMITTED TO THE
SENATE FINANCE COMMITTEE

OCTOBER 5, 1984

INTRODUCTION

My name is R. Sarah Compton. I am a partner in the law firm of Collier, Shannon, Rill & Scott in Washington, D.C. I am writing on behalf of LTV Steel Corporation ("LTV") and Cadence Chemical Resources, Inc. ("Cadence"). LTV is an integrated steel company headquartered in Cleveland, Ohio, with production facilities scattered throughout the United States. Cadence is a hazardous waste recycling company located in Michigan City, Indiana that manufactures the Cadence product from recycled hazardous waste feedstocks. LTV uses the Cadence product in its iron-making blast furnaces.

REUSE AND RECYCLING ACTIVITIES SHOULD BE EXCLUDED FROM A WASTE-END TAX

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 establishes a "Superfund" to finance the clean-up of inactive or abandoned hazardous waste disposal sites. At present, the Superfund is funded by taxes on petroleum and certain chemical feedstocks. One of the alternatives suggested by the Senate Environment and Public Works Committee for additional revenue sources for the Superfund is a waste-end tax. My purpose in testifying is to request that if such a tax is adopted by the Senate, that recycling and reuse activities be exempted from the tax.

If the Finance Committee chooses to proceed with a waste-end tax, the tax should serve a dual purpose: (1) to raise revenue to supplement other Superfund monies and (2) to discourage environmentally harmful methods of hazardous waste disposal. primarily land disposal. This second goal can be achieved by increasing the cost of such disposal relative to environmentally beneficial uses of hazardous wastes. The imposition of a waste-end tax on land disposal and the exemption of recycling and reuse activities from such a tax would encourage hazardous waste generators to recycle and reuse their wastes because of the lower relative cost.

Recycling and reuse activities are legitimate alternatives to land disposal which benefit public health and the environment. Recycling and reuse are environmentally beneficial because these activities reduce the volume of wastes that must be ultimately disposed of, in many cases significantly. In recycling operations, large volumes of hazardous wastes are processed to recover usable products for manufacturing operations. A significantly smaller quantity of wastes remain hazardous. In addition, in some industrial processes, the reuse of hazardous wastes or products manufactured from hazardous wastes has the additional positive environmental effect of transforming the waste chemically, physically or biologically to render it non-hazardous.

Thus, recycling and reuse reduce the potential problems associated with the land disposal of hazardous wastes by providing alternative methods of handling the waste. A waste-end tax that excluded recycling and reuse activities would encourage hazardous waste generators to divert their wastes into recycling and reuse because of the lower relative costs compared to land disposal. This environmentally beneficial result would further the primary goal of the nation's hazardous waste legislation -- the protection of human health and the environment from the adverse effects of hazardous waste.

LTV'S REUSE OF THE CADENCE PRODUCT IN ITS BLAST FURNACES

A vivid illustration of how recycling and reuse activities can have beneficial environmental effects is provided by LTV's use of the Cadence product in its iron-making blast furnace operations. Cadence has been involved in the production and marketing of the Cadence product since 1975. Since its inception, Cadence has attempted to develop technology to enable the Cadence product to be used as a feedstock in industrial processes. Through these efforts, the Cadence product is now used in a patented method of operating a blast furnace by LTV.

Cadence manufactures the Cadence product from solvent recycling stillbottoms and other carefully selected, hydrocarbon-based hazardous wastes. These raw feedstocks are blended and processed through a number of successive refining steps. The final Cadence product is a homogenous liquid mixture of solvents, resins and suspended solids suitable for direct use in LTV's blast furnaces.

For centuries, blast furnaces have been used to produce iron. Iron ore is loaded into the blast furnace with coke and other hydrocarbon sources. In the blast furnace environment, the carbon and hydrogen serve as reducing agents which break down iron oxides into metallic, molten iron. Two types of raw materials are used in blast furnaces. Solid raw materials --

iron ore, limestone, coke, chlorides -- are charged into the top of the furnace. Other raw materials -- hot blast air, oxygen, hydrogen-containing water vapor, liquid hydrocarbons, the Cadence product -- are added through the tuyeres, openings at the base of the furnace. The Cadence product augments the other hydrocarbon sources serving as reducing agents.

The economic value placed on the Cadence product by LTV proves that it is a valuable raw material necessary for its iron-making operations and not merely a dumping ground for unwanted wastes. Last year, LTV spent approximately $6 million on the Cadence product. By using the Cadence product as a source of hydrocarbons, LTV is able to save significant amounts of money on other raw materials. LTV and Cadence have entered into an exclusive five-year contract under which LTV agrees to buy all of the Cadence product. If Cadence increases its production, LTV will purchase the entire additional output.

The use of the Cadence product in the LTV blast furnace has a beneficial environmental effect. The blast furnace, with its enclosed gas system, is the ideal environment for the dissociation and consumption of the Cadence product's constituent hyrocarbon feedstocks. Very favorable oxidizing conditions caused by the extremely high temperatures in the furnace result in the complete dissociation of the Cadence product.

Hazardous waste residue from the blast furnace, if any, is minimal. Stack tests confirm that only extremely low levels of particulates, chlorides, lead and chlorinated hydrocarbons are emitted from the blast furnace combustion stack. All such emissions are in compliance with the Indiana State Implementation Plan requirements.

LTV's use of the Cadence product is a proven, environmentally safe method of handling hazardous wastes. The Finance Committee should encourage this and similar technologies by exempting recycling and reuse activites from a waste-end tax. Such an exclusion, because it would encourage generators to divert their wastes from land disposal to recycling and reuse, will further the primary goal of the nation's hazardous waste legislation -- the protection of human health and the environment from the adverse effects of hazardous wastes.

Statement of the Man-Made Fiber Producers Association
Concerning Senate Finance Committee Consideration of Superfund
Hearing September 19, 1984

The Man-Made Fiber Producers Association (MMFPA) wishes to submit the following statement concerning the tax issues relative to pending Superfund legislation. MMFPA is a trade association representing 90% of the man-made fibers produced in the U.S. which in turn represents some 75% of all yarns and fibers processed by domestic textile mills.

MMFPA fully supports reauthorization of Superfund to ensure continuation of needed rapid cleanup of existing hazardous waste sites. We believe, however, that H.R. 5640 recently passed by the House of Representatives is needlessly excessive and that the increase in funding incorporated in H.R. 5640 is more than the Environmental Protection Agency (EPA) can effectively utilize in their continuing program to clean up existing hazardous waste sites.

MMFPA is also concerned that the proposed increase in the chemical feedstock fees can have a negative impact on the U.S. man-made fiber industry as a result of increased costs of necessary ingredients used in the production of man-made fibers. Any such increase in costs can make a negative contribution to the competiveness of U.S. textile products in both the domestic and international markets.

In order to provide the needed revenue for continuation of Superfund and to make the tax burden more equitable, MMFPA urges that the Congress include in its Superfund legislation a national waste-end tax. Such a tax would provide needed increased revenue for the fund and provide an economic incentive for companies to create and utilize alternatives in the disposal of hazardous waste.

We urge the committee to support reauthorization of Superfund but at a level that reflects that which EPA can effectively utilize to make real progress in cleaning up existing hazardous waste sites. MMFPA also urges that the tax base for Superfund be broaden to include a national waste-end tax.

September 21, 1984

MOBIL OIL CORPORATION
STATEMENT ON SUPERFUND ISSUES
UNITED STATES SENATE
COMMITTEE ON FINANCE

Mobil Oil agrees that the cleanup of abandoned hazardous waste sites should be a high national priority. We also agree that CERCLA must be reauthorized and that the size of the fund will probably have to be increased somewhat. However, we are deeply concerned with the fivefold (S 2892) to sixfold (S 2959) increases in funding levels that have been proposed in recent legislation. Also, we are concerned that the tax burden continues to be directed toward a narrow segment of industry - oil and petrochemicals. Furthermore, we believe it is premature to reauthorize Superfund a year ahead of time particularly when it is not known what the needs are and how much cleanup money can be spent effectively and efficiently each year. Studies by EPA to answer precisely these questions, as required by Congress, are scheduled to be completed by the end of 1984. Experience is very limited in this new technology field of hazardous waste cleanup and the bulk of this experience has been generated in the past year. Therefore, it is imperative that the reauthorization not be rushed in order to take full benefit of the EPA study and their recent experience in next year's deliberations.

It takes time, manpower and considerable technical know-how to cleanup hazardous waste sites. Just as in the case of other major undertakings, they will not be cleaned up overnight. Most estimates indicate that cleanup of all sites may require 10 to 15 years to complete. Mobil suggests that funding should also be spread over a similar period. Certainly no evidence has been presented which supports raising the entire fund over a five year period. While the cleanup of hazardous disposal sites is an important national priority, it has to be considered in the context of other national needs.

Superfund, as currently authorized, is supported by its own tax system and is operated through a trust fund. Trust funds inherently carry the danger that Congress will not regularly focus on how effective a job is being done and they escape annual spending and revenue reviews. While objecting to trust funds in principle, we recognize that it is probable the concept will continue in the case of Superfund.

Therefore, we believe that any funding for cleanup should meet several important criteria. These are:

- o Limit funding to a reasonable level - neither over or under funding - that will cleanup sites in an effective and efficient manner.

- o Include substantial recovery from responsible parties in funding requirements. This factor has been essentially ignored in legislative proposals to date.

- o Cap the trust fund balance at a maximum of one to two years planned spending with taxation suspended whenever it exceeds this level.

- o Spread taxes equitably so as not to place any industry in economic jeopardy. Directionally, taxes should tie back to parties responsible in the past. Recent legislation considered equity when it overturned an IRS ruling which would have levied the tax on streams that were entirely internal to refineries and components of fuel.

- Limit funds to the primary objective - the cleanup of inactive waste sites - and avoid broadening the scope with other complex programs.

- Support voluntary cleanup of waste sites by the private sector in cooperation with concerned environmental groups.

With regard to revenues, the current tax rates on feedstocks can adequately meet possible projections of expenditure if joined by revenues from a tax on disposal of the same kinds of waste substances which created the hazards at these orphan sites. Taxation of waste should be economically neutral and proportioned for degree of hazard. Since regulators will be called upon to interpret any legislation, Congress should make it clear that streams which did not contribute to the current problem, such as over-burden removal from coal mining and water from petroleum drilling and production, should not be taxed.

With regard to equity, the burden of the current Superfund falls primarily on the oil and petrochemical industry - already the most heavily taxed industy in the nation. The proposals in the Senate would increase taxes on the oil segment by a factor of five (S 2892) or ten (S 2959). This would come at a time when profits from oil refining are severely depressed. Furthermore, the refining industry faces increased costs of EPA's accelerated lead phasedown which will add a substantial financial burden. Similarly, the proposals in the Senate would increase the tax burden on the petrochemical industry by a factor of four (S 2892) or five (S 2959). Goods made from petrochemicals in the U.S. would face tougher competition in both foreign and domestic markets. Therefore, we believe that the tax base must be broadened to keep from severely penalizing the oil/petrochemical industry.

Finally, Superfund should be limited to its basic objective of making abandoned hazardous waste sites safe. The program should not be diluted with other complex programs such as victims compensation, regulation of underground tanks and oil spill cleanup. Such dilution can only hamper the waste site cleanup effort. Also, these other programs are complex enough to be addressed and debated in their own right.

8184P

NAM
National Association
of Manufacturers

MARK N. GRIFFITHS
Assistant Vice President
Resources & Technology
Department

September 20, 1984

The Honorable Robert Dole
Chairman
Committee on Finance
United States Senate
Washington, DC 20510

Dear Chairman Dole:

This week, the Senate Committee on Finance is holding hearings to consider the revenue needs of the Comprehensive Environmental Response, Compensation and Liability Act, better known as Superfund. The National Association of Manufacturers has a strong interest in this legislation and the nation's hazardous waste programs, and respectfully requests that this letter be made a part of the hearing record.

On September 13, the Senate Committee on Environment and Public Works reported S.2892, a bill to reauthorize Superfund for five years. The Environment and Public Works Committee adopted a number of amendments to the statute, and indicated it would recommend a five-year funding package totalling $7.5 billion. How this 500% increase in the Superfund would be accomplished was not spelled out by the Committee, but assurances were made that details would be available in forthcoming report language. Because we have no other basis on which to analyze this tax package, NAM is assuming that the $7.5 billion will come from proportionally higher taxes on chemical feedstocks and crude oil and proportionally higher congressional appropriations.

Eighty-seven and one half percent of the existing $1.6 billion Superfund is derived from a tax on feedstocks and crude oil. Under our assumption, therefore, 87.5% of $7.5 billion, or approximately $6.6 billion, would be raised from these same sources under S.2892.

NAM has several concerns with the pace and scope of Superfund, as well as with some of the proposals pending to significantly amend the law.

I. SUPERFUND'S PRIMARY OBJECTIVE MUST BE KEPT IN SIGHT

The primary objective of Superfund, which we fear is in danger of being relegated to a lesser priority, is the mitigation of threats to public health and the environment arising from problem hazardous

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waste sites. While estimates may differ as to the number of such sites requiring remedial action, eventually all such sites will be identified and remedied. If the law governing current waste management practices, the Resource Conservation and Recovery Act, is effectively administered and enforced, no new Superfund sites will be created. Once all problem sites are remedied, Superfund can and should go out of business.

It has been suggested by some, however, that Superfund should become a permanent, growing fixture, available to serve a variety of societal ends but nurtured primarily by only one societal segment, industry. Three and one half years ago, a $1.6 billion Superfund was created. Today, the leading proposals would raise between $7.5 and $10 billion. What can the taxpaying industry expect the next time around? We believe we have the right to expect a sharply focused effort to remedy problem sites and ultimately retire Superfund.

II. CONGRESS IS LACKING IMPORTANT INFORMATION NEEDED TO LEGISLATE EFFECTIVELY

Section 301(a)(1) of existing Superfund law requires that the President submit by December 1984 a comprehensive report on experience with the implementation of the law. The Environmental Protection Agency has indicated in testimony that it will be able to produce the report at least two months in advance of this deadline. Several sections of this report will deal with issues that could significantly affect the decisions of the Finance Committee as to what level of revenue is needed and appropriate. These include:

- a summary of past receipts and disbursements from the Fund;
- a projection of any future funding needs remaining after the expiration of authority to collect taxes;
- the record and experience of the Fund in recovering Fund disbursements from liable parties;
- the impact of Superfund taxes on the Nation's balance of trade; and,
- the extent to which the tax burden falls on the substances and parties which create the problems addressed by Superfund.

Based on this report, the President is to include "any recommendations for legislative changes he may deem necessary for the better effectuation of the purposes" of the law, including recommendations concerning the authorization levels and taxes. This report would be quite valuable to the Finance Committee and the Congress as they deliberate the reauthroization of Superfund. Yet, the House of Representatives has already passed its version of Superfund reauthorization, and Senate reauthorization proponents are pressing for similar Senate action before the election recess, a scant month before the report will be available and a full year before the revenue raising authorities in Superfund expire.

The report would help fulfill the Finance Committee's need to get a fix on the extent to which remedial actions are being carried out through voluntary settlements which do not result in monies going in and out of the Fund.

NAM believes it would be unwise for Congress to embark on a multi-year reauthorization of this important statute without the benefit of this crucial report.

III. CAN EPA EFFICIENTLY AND EFFECTIVELY SPEND THE REVENUES PROVIDED FOR IN S. 2892?

We have serious doubts that the Environmental Protection Agency can effectively and efficiently spend approximately $1.5 billion per year on new projects. We are unconvinced that any bureaucracy can manage such sizeable growth in a program almost overnight without a significant amount of waste. EPA officials have testified more than once that they are not prepared to effectively and efficiently gear up to the levels of activity required by a $7.5 to $10 billion program. EPA will have to dramatically increase and train its manpower, award and monitor contracts, negotiate cleanup agreements, assess effectiveness and make needed corrections under the watchfull scrutiny and pressure of Congress and the glare of publicity. The urge to spend could overcome the obvious need to spend wisely.

It is in everyone's interest that the problem sites be remedied as quickly as possible. It should be of equal concern, however, that the remedial actions be well-planned and well-executed.

IV. VICTIM ASSISTANCE DEMONSTRATION PROGRAM

One amendment adopted by the Environment and Public Works Committee would establish a fund-financed five-year, $150 million "demonstration program" for "assistance to individuals suffering injury resulting from exposure to the release of hazardous substances, pollutants or contaminants....." This demonstration program would be used in five states to be selected by the Administrator of the Environmental Protection Agency.

It is NAM's experience that such a demonstration program, in the form of grants to states, will create a natural constituency for its continuance among the five states selected, and for its expansion among the other states and territories not initially chosen by the Administrator. NAM has little doubt that this "demonstration program" will become an ever-growing entitlement program, financed in perpetuity by industry. This eventuality could be hastened by the seeming unconstitutionality of a federal benefits program which favors one group of citizens over another simply on the basis of legal residence. Such a finding in federal court would most likely lead to uniform application of victim assistance to all states and territories, demanding an equivalent increase in the value of such assistance and a corresponding drain on Superfund.

NAM believes that Superfund should continue to be used for its original purpose: the cleanup of hazardous waste sites that pose a threat to health and the environment. The Victim Assistance Demonstration Program would divert the resources of Superfund away from this purpose, thereby prolonging the cleanup effort. NAM further believes that the Victim Assistance Demonstration Program ignores remedies available to individuals in state courts.

In summary, NAM believes there are too many important and compelling reasons why Superfund should not be subjected to hasty reauthorization this year, and recommends that the Finance Committee use the knowledge gained in this week's hearings and that to be gained from EPA's forthcoming report to fashion well-considered, environmentally sound legislation in 1985.

NAM appreciates this opportunity to place its views in the hearing record.

Respectfully,

Mark N. Griffiths

Mark N. Griffiths
Assistant Vice President
and Director of Environment
Quality Committee
National Association of
Manufacturers

MNG:sa

napim NATIONAL ASSOCIATION OF PRINTING INK MANUFACTURERS INC
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JAMES E. RENSON, Executive Director

September 21, 1984

Mr. Roderick A. DeArment
Chief Counsel
Senate Committee on Finance
Room SD-219
Dirksen Senate Office Building
Washington, DC 20510

Re: Finance Committee Hearing
Superfund Reauthorization S.2892
September 19, 1984

Dear Mr. DeArment:

Thank you for allowing the National Association of Printing Ink Manufacturers an opportunity to participate in the Committee hearings on S.2892 by submitting written testimony on the potential economic impact of the proposed legislation on the printing ink industry in the U.S. We believe the proposed legislation could have a very significant adverse economic impact on the printing ink industry which should be considered by the Committee.

INDUSTRY CHARACTERISTICS

The National Association of Printing Ink Manufacturers (NAPIM) is a national trade association representing small, medium and large printing ink manufacturers in the United States. Its members account for about 90% of the total $1.5 billion merchant sales of printing ink in the U.S.

The industry is composed of 228 ink companies of which at least 190 are believed to be smaller than $10 million in sales and are thus small entities. Data from the U.S. Census of Manufactures indicate that out of a total of 463 ink manufacturing establishments in the U.S. in 1982, 313 employed less than 20 employees. Obviously, the industry is composed primarily of small entities.

DEPENDENCE ON PETROCHEMICALS

More than 80% of all printing ink raw materials are either petrochemicals or directly derived from petrochemical intermediates. Indeed, of the approximately 58 chemicals being considered for feedstock tax increases, at least 20 are of concern to the printing ink industry. For this reason the three-fold to five-fold increases in petroleum feedstock taxes proposed in S.2892 will have a significant impact on the printing ink industry.

As will be shown later in this statement, the printing ink industry is a low profit industry under intense pressure from rising petroleum and petrochemical prices. Every government regulation, no matter how justified, which places an additional inequitable tax burden on the petrochemical industry creates an additional disincentive. Such disincentives weaken the strength of the petrochemicals industry versus foreign competition and have adverse consequences for the U.S. industries which depend upon petrochemicals for raw materials. Thus the printing ink industry is vitally dependent on a strong and viable petrochemical industry.

ECONOMIC IMPACT

NAPIM is extremely concerned about the House version of Superfund legislation and urges the Senate to take a more moderate approach. Besides weakening the petrochemicals industry which supplies the printing ink industry, NAPIM believes that the added tax burden proposed under H.R. 5640 will have serious economic consequences on the printing ink industry itself.

Based on an in-depth study of printing ink financial and operating ratios conducted by NAPIM for the year 1983, raw materials represent 55.3% of the industry's sales dollar. NAPIM believes that the effect of the higher feedstock taxes proposed by H.R. 5640, when passed down through the petrochemical supply chain, could result in increases in the printing ink industry's total raw material costs of at least 5% and possibly as much as 10%. This in turn would result in a diminution of profits of from three to five percentage points.

In 1983 the median pre-tax profit for printing ink companies in the U.S. was 4.5% of sales while the lower quartile earned only 2.4% on sales. Clearly a reduction in earnings of three to five percentage points would completely eliminate the profits of 25% of all U.S. printing ink companies and might even eliminate virtually all of the profits of as many as half of all printing ink companies in the U.S. Therefore, NAPIM submits that higher raw material costs resulting from the proposed feedstock tax increases would result in a severe dislocation of the printing ink industry with probable plant closings and loss of jobs.

THREAT OF FOREIGN COMPETITION

As noted earlier, the proposed increases in feedstock taxes will weaken the position of U.S. industry versus foreign competition. Environmental pressures have been driving the pigments industry (a petrochemical dependent industry on which the printing ink industry depends) into the hands of foreign ownership so that a major portion of the U.S. organic pigments industry is now in European and Japanese hands. While most foreign owners are still continuing to produce pigments in the U.S., they have the capability of moving some of their product overseas when economic conditions may warrant. In times of shortages this situation compounds a serious threat to the well-being of the U.S. printing ink industry.

Since the feedstock tax authorized by CERCLA and the increase proposed under H.R. 5640 are charged only to the U.S. petrochemical and petrochemicals industry, they represent a cost not borne by foreign manufacturers and further lessen the competitive position of the U.S. petrochemicals industry as well as those industries which depend on it as their source of raw materials. The weakening of the petrochemicals industry's competitive position versus foreign imports has also been reflected in the printing ink industry which had previously been relatively immune to foreign competition. In the last three years the industry has experienced sharp increases in printing ink imports from foreign manufacturers.

COMBINED WASTE-END FEEDSTOCK TAXES ARE DOUBLE TAXATION

The printing ink industry does not oppose the concept of a waste-end tax to support CERCLA and, in fact, feels that it is a reasonable concept. However, the industry does have serious concerns about the approach of combining substantial waste-end taxes with equally substantial feedstock taxes. This approach will create an inequitable tax burden to all industries which may be contributors to the hazardous waste disposal problems. This combination of taxes will result in double taxation for the petrochemical industry and the industries which depend on it.

It is evident that feedstock taxes will be passed through to petrochemical consuming industries with the result that industries such as printing ink will be taxed twice for the same materials; once at the front-end and again at the waste-end. NAPIM submits that the imposition of waste-end taxes must be mitigated by some relief in feedstock taxes at least to the extent that feedstock taxes are not increased simultaneously with the imposition of the new waste-end taxes as proposed in the House version.

While the waste-end tax of $50 per ton dry weight suggested by the Chemical Manufacturers Association appears to be a reasonable compromise, the Committee should note that petrochemical dependent industries would also be faced with raw material price increases due to the pass-along of the excessive feedstock taxes proposed in the House.

CONCLUSION

NAPIM asks that the Committee reevaluate the potential economic impact of the House version of Superfund Reauthorization and reduce the unnecessarily high feedstock taxes proposed therein. We respectfully submit that the $50 per ton dry weight tax suggested by the Chemical Manufacturers Association would raise the needed funds to effectively administer CERCLA without imposing a substantial economic hardship on the many sectors of the chemical industry, including the printing ink industry, which are dependent on the petroleum and petrochemicals industries for their raw materials.

Respectfully submitted,

James E. Renson
Executive Director

jjr

NATIONAL TANK TRUCK CARRIERS, INC.
THE NATIONAL ORGANIZATION SERVING THE FOR HIRE TANK TRUCK INDUSTRY

CLIFFORD J. HARVISON
MANAGING DIRECTOR

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24 September 1984

The Honorable Robert Dole
Chairman
Senate Committee on Finance
The United States Senate
Washington, DC 20510

Dear Chairman Dole:

I am writing to you in your capacity as Chairman of the Senate Committee on Finance regarding the Superfund Amendments of 1984. We ask that this letter be made a part of the record of your hearing on September 19, 1984, on S. 2892.

National Tank Truck Carriers is the national trade association representing trucking companies operating as common and contract carriers specializing in the transportation of liquid and dry products in bulk--the vast majority of which would be considered hazardous materials and/or hazardous substances under both the Hazardous Materials Transportation Act of 1974 and CERCLA.

Most recently, I have been informed that the Committee on Environment and Public Works has developed and is circulating copies an option for consideration which would: (a) treat all hazardous materials (as defined by the regulations of the U. S. Department of Transportation) as hazardous substances (under CERCLA); and (b) impose a tax of $10 per common and contract carrier shipment of such hazardous substances.

While we have no objection to the legislative codification of all DOT hazardous materials as hazardous substances (and, indeed, would support such an amendment); we strongly object to the imposition of the "per shipment" tax as it was outlined in that Committee's letter of September 17, 1984.

As background, it must be understood that, regardless of competition with other modes of transportation, prime competition within the trucking industry is with so-called private carriage (transportation of a company's products in its own trucks) which would be exempt from this tax. The tax alternative addresses only common and contract carriers which comprise smaller segments of the trucking industry than the private fleets.

For instance, in the tank truck segment of the trucking industry, most chemical and petroleum companies own and operate their own fleets of tank vehicles which make up 60 percent of the cargo tank population.

Moreover, recent regulatory decisions by the Interstate Commerce Commission have greatly expanded the scope of private carriage. Since the proposal would impose the tax only on the common and contract carrier sectors--the $10 tax would prove to be a substantial and discriminatory competitive barrier within the trucking industry. Please note that in today's deregulated, highly competitive the trucking industry, fractions of a cent per gallon or pound often determine whether the product will move in private or common/contract carriage. A $10 per load differential could prove to be a significant "cost hurdle" for the membership of this association.

This cost differential would be further exaggerated when the administrative costs of acting as a tax collector for the Internal Revenue Service is added to our members' overhead.

Finally, the "common/contract" carrier language for this fee treats as equals an 80,000 gallon capacity barge, a 30,000 gallon rail tank car, an 8,000 gallon highway cargo tank and a 55 gallon drum. The effect of the release of a hazardous substance is a function of several variables--toxicity, degradibility, solubility and the amount of the material spilled. A flat $10 per shipment fee applied to the wide variety of shipping containers without regard to capacity and degree of hazard of the product ignores reality.

As far as spill clean-up and responsibility, we wish to note that all tank truck carriers have defined responsibilities with regard to environmental protection. Regulations issued by the Environmental Protection Agency, under the Clean Water Act CERCLA and the Resource Conservation and Recovery Act, clearly state that the carrier is to be responsible for the clean-up of environmentally sensitive product releases which occur in transportation. This is in addition to registration and reporting requirements.

The Congress, itself, dealt with the issue of environmental damage responsibility by motor carriers in the Motor Carrier Act of 1980. In Section 30 of that legislation, Congress mandated insurance and bonding requirements upon motor carriers for "...public liability, property damage, and environmental restoration..." to limits to be determined by the Secretary of Transportation. This Association strongly believes that the Secretary has not complied with the intent of Congress in imposing proper liability limits. In that regard, NTTC expended thousands of dollars in a lawsuit to force compliance by the Executive branch. This suit was dismissed--not on the merits--but on a ruling that NTTC did not "have standing" to challenge the issue.

In conclusion, NTTC believes the $10 per shipment tax proposal on only common and contract carrier shipments of hazardous materials is wrong. Spill clean-up requirements for motor carriers is already law. Minimum insurance requirements exist already. This proposal will not address the real problem of motor carrier related environmental restoration but will cause significant damage to our industry.

Mr. Chairman, we thank you for this opportunity to present our industry's position on this important issue. We appreciate your consideration of our comments and their inclusion in the record.

Very truly yours,

Clifford J. Harvison
Managing Director

NASR
National Association of Solvent Recyclers
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September 25, 1984

Mr. Roderick A. De Arment
Chief Counsel
Committee on Finance
SD-219 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Mr. De Arment:

The National Association of Solvent Recyclers (NASR) would like to urge the Senate Finance Committee not to adopt any waste-end tax that could be construed to tax the beneficial recycling of hazardous wastes.

NASR testified before the House Ways and Means Committee this summer stating objections to the waste-end tax language proposed in H.R. 5640. The Ways and Means Committee dropped the waste-end tax portion from the House Superfund bill; NASR hopes to prevent similar language from being attached to the Senate's Superfund proposal.

A summary of NASR's concerns follows:

NASR is a nationwide non-profit trade organization of approximately 70 independent companies whose primary business is the reclamation of pure solvents from used solvent streams and the recycling of these recovered solvents for industrial use. About 70 percent of the wastestream accepted by NASR members is reclaimed to meet virgin specifications. Most of the balance is used as a fuel in cement kilns and blast furnaces. The processes in kilns and furnaces assure complete and total destruction of the waste. The resulting residue (about 5 percent) is disposed in accordance with EPA and state regulations. The recycling industry is spurred by economic incentives. The imposition of a waste-end tax would be an economic disincentive to beneficial reclamation of spent solvents which would otherwise be disposed in a land facility or in an incinerator.

The waste-end tax, as had been proposed under H.R. 5640, would have taxed the disposal of hazardous substances but exempted incineration of hazardous substances from the tax. As written, the mistaken inference could have arisen--that all handling of hazardous waste, including recycling and reuse is disposal and therefore subject to the tax.

Such a tax would disrupt the fragile economics of recovering spent solvents and discourage an activity that Congress has recognized and encouraged as being environmentally-sound and a preferable alternative to disposal. If a waste-end tax is pursued it should be to tax only environmentally-undesirable disposal practices such as land disposal. It should be clarified in the legislation that recycling and reuse of hazardous substances is not disposal.

Without the recycling and reuse exemption, the solvent recycling industry could no longer be a viable, necessary, and commercial alternative to land disposal of solvent waste products.

NASR appreciates your consideration of our members' concerns.

Sincerely,

Faith Gavin Kuhn
Executive Director

Austin P. Olney
General Counsel

COMMENTS ON

PROPOSED SUPERFUND REAUTHORIZATION

BY

PACIFIC RESOURCES, INCORPORATED

BEFORE THE

SENATE FINANCE COMMITTEE

SEPTEMBER 25, 1984

Pacific Resources, Inc. (PRI) appreciates the opportunity to comment on the proposed reauthorization of the Superfund Act. PRI is an independent energy company headquartered in Honolulu, Hawaii, with 1983 revenues of $1.6 billion. The company's primary business and major source of revenue is oil refining and petroleum product sales. From its strategic mid-Pacific location, PRI markets energy products and services in Hawaii, the U.S. West Coast, the South Pacific and Asia, and is a major supplier of petroleum products to the U.S. military.

PRI's subsidiary Hawaiian Independent Refinery, Inc. (HIRI) operates a petroleum refinery with a rated capacity of 67,900 barrels per day. In 1983 PRI and HIRI paid approximately $180,000 in feedstock taxes to fund the Superfund program, and we are thus extremely interested in Congressional activity aimed at reauthorizing and expanding the Superfund statute.

PRI is a strong advocate of environmental protection. Our unique vantage point in the Hawaiian Islands gives us a deep appreciation of the value of a clean and unspoiled environment. The company conducts its operations with an eye towards protecting our environmental surroundings. We have also supported regulations aimed at better protection of public health. The most recent example is our support for the Environmental Protection Agency's proposed rule to accelerate the phasedown of lead in gasoline.

We urge the Committee to defer until next year the matter of Superfund reauthorization and extension. We note that Congress does not need to address this issue at this time, since current authority for the Superfund program does not expire until September 30, 1985. In view of the current worsening economic climate in the refining industry, prudence dictates that legislation be postponed until Congress is able to observe and determine the economic trend in the industry -- at least through year-end 1984.

The Committee members are undoubtedly aware of the current low margin of profitability in the oil refining industry. The independent refining sector has been particularly hard-hit by the combination of world oil oversupply and increased competition from foreign refined products sold at distressed prices. Many independent refiners have been unable to withstand these economic pressures; numerous independent refiners are currently the subject of insolvency proceedings. Since January 1, 1981, a net total of 86 refineries with a total capacity of 2 million barrels per day has ceased operations.

PRI has managed to avoid a totally adverse profitability picture because its refinery is a modern one and its operations are both lean and efficient. Last year, we led the Fortune 500 in revenue per employee. Nevertheless, our net profitability fell to $11 million in 1983 and earnings thus far in 1984 lag our expectations and projections.

Given this economic climate in our industry, the prospect of an increase in the Superfund tax is an alarming one. It would be difficult to cope with any increase in the Superfund levy until the oil market stabilizes and refinery margins increase above a fraction of a cent, if indeed they show any profit at this time. The House-approved Superfund extension bill would subject PRI and other hard-pressed independent refiners to an unprecedented tax increase. The basic 7.86¢ per barrel tax rate in the House-passed bill would increase our yearly Superfund taxes by more than $1.5 million, roughly 15% of last year's profits.

Some suggest that the tax increase can be directly passed through to consumers. We do not accept this argument. Given the intensely competitive nature of the current oil market, larger domestic refiners and importers of refined products would have every incentive not to pass through all of the tax in order to increase market share. Any increase in their sales will occur at the expense of independent refiners, who lack alternative profit centers needed to subsidize the tax. We would be forced to reflect the full impact of the tax increase in our products, which would result in severe competitive disadvantage. This Committee and the full Congress must not overlook our industry's economic health in its desire to clean-up the environment and protect the public health.

PRI notes that the Environmental Protection Agency has voiced concern about its inability to make efficient use of either the $10.2 billion fund created by the House bill or the $7.5 billion bill approved by the Senate Environment Committee. The Administration has joined EPA in asking that consideration of the issue be postponed to allow further time for study and analysis. We note that EPA is currently at work on important studies of the current Superfund program, and that these studies will not be available until December of this year. At least one of these studies will contain important information about the fairness of the existing funding mechanism. We urge Congress to await its completion before acting.

When the Committee does move to reauthorize this program, we hope that you will adopt a broader-based tax than that currently in effect. The current petroleum tax has generated about 15% of the total fund from the refining industry, which reflects the original perception of the level of waste generated by this industry. Recent estimates suggest that the refining industry generates less than 5% of hazardous wastes, and is thus already paying more than its fair share of the Superfund tax. Given this fact, and the current adverse economics of both the petroleum refining and petrochemical industries, we suggest that the Committee adopt a broader-based tax as part of its 1985 reauthorization package. Increased funding from general revenues must also be considered. All participants in the U.S. economy, both producers and consumers, have experienced short-term economic benefits as a result of inadequate and unsafe waste disposal practices in the past. Now that we have a greater appreciation of the magnitude of this problem, it is only fair that a larger spectrum of the economy participate in funding the necessary clean-up efforts.

Finally, in closing, we urge the Committee to make certain that the economic impact of the new funding mechanism upon domestic refiners is balanced by taxing imported products at an equivalent rate. Current law provides for taxation of imported products at the same rate at which domestic refiners are taxed. This approach must be continued. U.S. refiners must insist on continued taxation of imports to maintain domestic refiners' viability in an increasingly competitive products market.

RMA
RUBBER MANUFACTURERS ASSOCIATION
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Statement

of the

Rubber Manufacturers Association

on S.2892 and H.R.5640

Submitted to

the

Senate Committee on Finance

by

Donald G. Brotzman

President

Rubber Manufacturers Association

September 20, 1984

The Rubber Manufacturers Association ("RMA") respectfully sumbits the following comments on S.2892 and H.R.5640, bills to reauthorize the Comprehensive Enviornmental Response, Compensation and Liability Act ("CERCLA") or "Superfund". RMA is a national trade association representing the tire and rubber industry with a membership of approximately 200 companies which employ approximately a quarter-million workers. Member companies produce some 40,000 products including tires, tubes, hose, belts, footwear, roll covering, gaskets, sealing devices, hospital and surgical supplies and sports equipment. RMA members account for approximately 90 percent of all rubber production in the United States. The rubber industry is a major user of chemicals and, as such, has a longstanding interest in and commitment to the control of hazardous and toxic waste.

The RMA supports the reauthorization of Superfund. However, we believe that funding levels should be based on realistic assessments of the Environmental Protection Agency's ("EPA") annual spending needs. Funding levels in S.2892 as well as the House-passed reauthorization measure, H.R.5640, appear to be excessive. Overfunded and inefficient programs have no place in the critical national task of cleaning up abandoned hazardous waste sites. Hazardous and toxic sites must be cleaned up in order to protect the nation's health and environment. However, burdening the Superfund program with excessive funds or additional tasks will only detract from this goal.

As stated above, RMA maintains that the $7.5 billion authorization level called for by S.2892 is excessive and has not been justified. These observations are all the more true of H.R.5640. As passed by the House on August 10, Title V of H.R.5640 makes substantial changes to the current Superfund law. These changes would increase, at a minimum, the overall targeted feedstock collections from the chemical industry to a level of 2.9 times ($748 million annually) the current amount targeted ($261 million annually). These feedstock collections could rise to a level of 4.0 times ($1.04 billion annually) the current targeted amount. Title V also requires the feedstock fees to be indexed to the producer price index (ppi). Additionally, a second feedstock schedule which would take effect on January 1, 1987, if a waste-end tax is not enacted is included in the bill. These additional feedstock taxes are designed to raise a minimum of $1.2 billion over the remaining life of the law. Thus, the continuation of taxes under H.R.5640 could produce revenues equal to or greater than $11.7 billion.

EPA Administrator William Ruckelshaus, on March 15, 1984, before Representative James Florio's Energy and Commerce Subcommittee warned that "additional infusions" of funding beyond EPA's capabilities "could have the paradoxical effect of retarding our activities, not speeding them up." In discussing the House-passed bill, EPA Assistant Administrator Lee Thomas said the bill could have the undesired effect of jeopardizing the accelerated pace of the Superfund cleanup because it would "impose on us a number of serious new administrative and technical burdens which will hamper us in accomplishing our primary mission -- to clean up uncontrolled hazardous sites."

A more realistic and more workable funding level than that contained in the House and Senate versions was suggested by Assistant Administrator Thomas on September 12, 1984. Mr. Thomas spoke of a $1 billion per year level. Yet even this figure is not predicated on as sound a basis as it could be, and a thorough evaluation is necessary. The original 1980 Superfund law mandated a study of the program to be prepared by the EPA by December 1984. The report was commissioned to provide Congress sufficient information in order to prepare for reauthorization before the law expires in September 1985. This EPA report is to contain detailed information on the progress of cleanup and the future funding needs of the agency. RMA believes that it is important for Congress to make a precise determination of what EPA will need over the next five years to successfully manage the cleanup. Congress can best determine what EPA needs for Superfund reauthorization when it:

1) examines the accomplishments of the startup effort;
2) studies current progress being made to clean up sites; and
3) prescribes the manageable resources and goals for the next five years.

In addition to the funding levels, H.R.5640 imposes unnecessary and disruptive amendments onto a law which, in our opinion, already provides a workable framework for waste site cleanup. And S.2892 establishes an unprecedented victim's compensation pilot program. A wiser, more prudent course of action would be to discuss such provisions as well as federal cause of action in a non-political year.

In conclusion, the RMA wishes to stress that it supports reauthorization of Superfund. That authorization, however, should take place after EPA makes its report to Congress and should contain balanced funding levels and be restricted to the original purpose of Superfund, namely, the cleanup of waste sites.

STATEMENT BY LOUIS R. LAWSON, JR
ON BEHALF OF SOLITE CORPORATION

TO THE

SENATE FINANCE COMMITTEE
SUPERFUND REAUTHORIZATION HEARINGS
JUNE 19, 1984

My name is Louis R. Lawson, Jr. I am Fuels Division Manager and Research Coordinator for Solite Corporation, with headquarters in Richmond, Virginia.

One of the options for possibly funding the proposed Superfund Bill (S.2892) is a waste-end tax or fee. If such a tax or fee is adopted by the Senate Finance Committee, we request that an exemption from such taxes or fees be granted to those industries burning wastes as process fuels recovering the energy in useful maneuvers and conserving America's irreplacable conventional oil and coal resources.

Solite and its subsidiaries are engaged in the manufacture of lightweight aggregate, a product used by the construction industry in concrete and lightweight masonry blocks. Lightweight aggregate is produced in rotary kilns through the application of intense heat to expand crushed clay, slate or shale. Lightweight aggregate weighs approximately half as much as crushed stone. Solite and its subsidiaries use large amounts of burnable hazardous wastes consisting principally of industrial solvents and waste oils as fuels in the manufacture of lightweight aggregate. Solite and its subsidiaries have safely burned over 77 million gallons of hazardous wastes as fuels since 1976. This amounts to a national energy savings of 55 million gallons of oil or 310 thousand tons of coal.

An energy recovery exemption would not only help promote and encourage the safe and efficient destruction of hazardous wastes for energy recovery, but also help to ensure that cost-effective waste fuels would continue to be available to fuel-intensive manufacturing facilities such as those in the lightweight aggregate, cement, iron, steel, lime, paper, and phosphate industries.

The Industrial Research Laboratory of the U.S. Environmental Protection Agency has spent over eight million dollars in testing the burning conditions and destruction efficiencies in using hazardous waste as fuel in industrial boilers and furnaces in a series of more than 30 test programs. One of the tests was conducted at one of Solite's lightweight aggregate facilities. The tests demonstrated that Solite's kilns consistently achieve a hazardous waste destruction efficiency in excess of the 99.99% destruction efficiency required by the USEPA, thereby safely destroying the wastes while conserving our Nation's natural gas, oil, and coal resources. The EPA has stated that they believe there is sufficient existing industrial furnace and boiler capacity to safely destroy all of the burnable hazardous waste generated in the United States today and for the foreseeable future. Attached to my written comments is a brief summary of the Solite test findings prepared by Monsanto Research Corporation, which performed the tests under contract to the USEPA. Also attached is a brochure which describes our process for recovering energy while meeting EPA environmental standards.

Companies such as Solite can afford to continue to use hazardous wastes as fuels only as long as the cost of the wastes is less than the cost of conventional fuels such as coal and oil. The imposition of a waste-end tax on hazardous wastes burned for energy recovery would have a significantly adverse impact on the cost-effectiveness of burning hazardous wastes in place of fossil fuels. The fee would add to the cost of burning industrial solvents and waste oils, and , along with the other costs of burning these waste fuels, narrow further the gap between the cost of burning waste fuels and the cost of burning conventional fuels. It is clear, therefore, that the ultimate impact of a waste-end fee on hazardous wastes used as fuels will be to discourage their use for energy recovery. The result would be extremely unfortunate, not only for the industries that rely on these waste fuels to hold down production costs, but also for the environment and natural resources of our Nation. Millions of gallons of burnable hazardous wastes that otherwise would have been safely destroyed would be disposed of either improperly or by methods less protective of the environment than high-temperature thermal destruction. Further, millions of gallons of imported oil would be burned needlessly.

We encourage you not to rely on the fact that hazardous waste disposal for energy recovery is not now regulated under the Solid Waste Disposal Act as the basis for an exemption from the fee. Although facilities that burn hazardous wastes for energy recovery are currently exempt from USEPA regulation under the Solid Waste Disposal Act by virtue of existing regulations at 40 C.F.R. § 261.6 (1983), EPA has stated that it intends to regulate these facilities at some point in the future. See, 48 Fed. Reg. 14472 (April 4, 1983). Accordingly, should you choose to adopt a waste-end fee, we urge you to exempt from the fee the disposal of any waste or substance for energy recovery in accordance with the standards applicable to energy recovery facilities permitted under subtitle C of the Solid Waste Disposal Act. An exemption expressed in this manner would ensure not only that hazardous waste disposal for energy recovery would be exempted from the fee when it becomes subject to regulation in the future, but also that only those facilities that are operated in accordance with USEPA standards would be exempt from the fee.

STATEMENT FOR THE RECORD
OF THE STANDARD OIL COMPANY OF OHIO

PRESENTED TO THE

SENATE FINANCE COMMITTEE

U.S. SENATE

ON THE

REAUTHORIZATION OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT

SEPTEMBER 21, 1984

STATEMENT FOR THE RECORD REGARDING REAUTHORIZATION OF CERCLA PRESENTED TO THE SENATE FINANCE COMMITTEE, September 21, 1984

The Standard Oil Company (Ohio), which is also known as Sohio, is an integrated natural resources company with interests in oil, chemicals, coal, industrial products, and mining. Our corporate headquarters are in Cleveland, and we have industrial facilities located throughout the lower 48 states and Alaska.

Sohio has a long-standing commitment to preserving and enhancing environmental quality. The cleanup of hazardous waste disposal sites is no exception to this responsibility. Because cleanup of abandoned hazardous waste sites which pose a threat to human health or the environment has not yet been completed, it is obvious that reauthorization of CERCLA will be a necessity. Sohio supports reauthorization of CERCLA during 1985 and accomplishment of its cleanup goal, but has serious concerns over some of the funding and scoping provisions which have recently been suggested.

In order to make any CERCLA reauthorization bill economically efficient and environmentally effective, Sohio recommends the following:

1. Reauthorize in 1985, following completion and consideration of the CERCLA Section 301(a) study;
2. Make funding levels commensurate with funding needs-taxes are needed to supply no more than $400 million to $770 million per year.
3. Do not use a waste-end tax;
4. Continue the current feedstock tax using the existing rates and list of substances, with an expanded borrowing capacity;

5. Do not include study or regulation of underground storage tanks under CERCLA;
6. Retain complete exclusion of cleanup of petroleum substances from CERCLA;
7. Mandate site-specific CERCLA cleanup standards, based upon local groundwater uses and upon risk factors such as waste toxicity and mobility and area hydrogeology.
8. Concentrate cleanup efforts on "hazardous substances," rather than including "pollutants and contaminants;" and
9. Rely upon existing toxic tort and worker compensation systems rather than instituting a new federal cause of action.

TIMING OF REAUTHORIZATION

The original 1980 CERCLA legislation contained, under Section 301(a), a requirement that EPA complete a study of CERCLA effectiveness and needs by the end of 1984. This study would analyze response effectiveness, past expenditures, future funding needs, experience with cost recoveries, state participation, impact of taxes, equity of taxation methods, and the need to tax additional substances. Because there are so many variables and unknowns associated with implementation of CERCLA (e.g., number of sites, cost per site, cost recoverability, level of contamination, extent of cleanup required), Sohio recommends that CERCLA be reauthorized during the 1985 legislative session, after this 301(a) study has been completed. This would give EPA, Congress, and the states a maximum amount of time to learn about the workability, technical requirements, and problems of CERCLA implementation, thereby improving the efficiency and effectiveness of the cleanup program. This would also provide time to thoroughly study funding options. EPA Administrator William Ruckelshaus and the Office of Management and Budget are on record as supporting CERCLA reauthorization in 1985.

FOCUS OF CERCLA

While Sohio supports reauthorization of CERCLA, we feel strongly that the funds and resources authorized for this program should be carefully and efficiently utilized in an environmentally sound and cost-effective manner. We also feel that funding of CERCLA should be in the amount required to clean up sites, and should not be used to fund other programs, such as regulation of underground storage tanks and victim compensation programs.

FUNDING LEVELS

In order to determine which funding mechanisms are most appropriate for the purposes of CERCLA, it is necessary to first determine the amount of money which must be raised. Current EPA estimates, according to the "Son of Superfund" report released earlier this year by EPA's Superfund Task Force, predict that 1000 to 2200 sites will require cleanup under Superfund. At an EPA-estimated average of $7.7 million per site, this will require a fund totaling $7.7 billion to $17 billion. This estimate assumes that all 56 percent of the sites which EPA estimates have groundwater contamination will require an engineering solution to groundwater cleanup. This represents a worst-case situation, since it is likely that many of the sites which have groundwater contamination will only require plume containment, rather than remedial action. Although EPA has stated that it will take approximately 14 years to clean up these sites, we have used a conservative estimate of ten years. Therefore, the amount which must be available on an annual basis for site cleanups is between $770 million and $1.7 billion per year. Of this amount, approximately 42 percent is anticipated by EPA to be contributed by private party cleanups. Thirty percent of the remainder is estimated to be recoverable from responsible parties. Additional funds totalling approximately $320 million/year would be required for administration, research and development and removal actions. Additionally, recent bills have proposed to contribute approximately $230 million per year from general revenues. This means that $400 million to $770 million per year must come from Superfund. Since the current feedstock tax is designed to raise approximately $320 million per year, the existing tax structure already provides 80 percent of the necessary funding for the base case of 1000 sites. However, if additional sites are placed on the National Priority List, raising the total to 2200 sites that require cleanup, an annual funding increase of approximately $450 million may be needed in addition to the amount raised by the current taxing program.

Based on this conservative cost analysis, the maximum amount which needs to be raised annually from taxes in order to fund site cleanups is $770 million. In addition, EPA has stated that the Agency can effectively spend no more than $1 billion annually for site cleanups over the next five years.

SOURCE OF FUNDS

In order to pay for cleanup of the many abandoned hazardous waste sites which have been and will be identified on EPA's National Priority List (NPL), it is necessary to have a reliable source of funding for the CERCLA program. The selected funding mechanisms should be as equitable as possible, require minimal collection effort, provide a reliable and consistent source of funds, avoid economic inequities which would favor imports over domestic products or put American exports at a disadvantage in world markets, and avoid disruption of the Resource Conservation and Recovery Act (RCRA) hazardous waste management program.

Funding for activities not directly related to site cleanups should not be included. In order to avoid unjust taxation of companies for funds which are not truly needed, every effort should be made to estimate the amounts which are legally recoverable from disposers and other responsible parties, and those costs should be subtracted from the total required funding level to provide a more accurate picture of the actual tax funding levels required. In addition, it is important to remember that many industries are already spending large sums of money to clean up their own sites, without utilizing any CERCLA funds. This further reduces the level of funds which must be raised by taxes.

Sohio believes that the optimum funding method to accomplish these goals is extension of the existing feedstock tax at its current rates and level with expanded borrowing authority to be utilized in years in which actual cleanup costs exceed available CERCLA fund resources. Monies could be borrowed from general revenues, or from third parties, and repayment of amounts borrowed could be amortized over a fixed period, with payments originating both from recoveries and from feedstock taxes. In this way, a reliable source of funding could be continued and inequities in CERCLA tax burdens would be minimized. This method would avoid an unneccessary accumulation of funds which could exceed available administrative and technical resources and result in a rushed and less effective cleanup.

WASTE-END TAX

Sohio believes that the Comprehensive Environmental Response, Compensation, and Liability Act should provide for the cleanup of abandoned sites at which past waste management practices pose a threat to public health or the environment, and that the Resource Conservation and Recovery Act (RCRA) should be relied upon to regulate current and future waste management practices. Unfortunately, some believe that CERCLA should be utilized, in addition to RCRA, to influence current and future waste management practices and would impose a waste-end tax as a CERCLA funding mechanism to accomplish this task. However, a waste-end tax may encourage illicit waste management methods and would be extremely ineffective at providing funds for the cleanup of abandoned sites. The reasons for this ineffectiveness are outlined in the following paragraphs. Sohio believes that CERCLA cannot effectively provide for both the cleanup of abandoned sites and the influencing of future waste management practices, and that the former should remain its sole objective.

A waste-end tax would be a highly undesirable funding mechanism for CERCLA. The major drawbacks of a waste-end tax are that it would:

1. Create unfair economic advantages favoring imported products over domestic products and foreign products over U.S. exports;

2. Be administratively difficult and costly to collect and would require utilization of an administratively infeasible "degree of risk" approach.
3. Negatively interfere with the RCRA program;
4. Not provide a consistent and reliable source of funding;
5. Potentially encourage illicit waste disposal and intentional under-reporting of waste generation rates; and
6. Have severe inequitable economic consequences on certain types of waste and waste disposal (e.g. deepwell injection and mining wastes).

Each of these problems with a waste-end tax is more thoroughly described in the following paragraphs.

- Economic Inequities

  When CERCLA was originally enacted, imports of feedstocks were taxed. By this action, Congress showed an understanding of the trade inequities which could occur if a tax were imposed on domestic chemicals but not on foreign chemicals. U.S. chemicals have in recent years maintained a positive, although declining, trade balance. Because the U.S. is currently suffering significant trade deficits, this positive contribution of U.S. chemicals is important to the overall U.S. trade situation. If a waste-end tax were enacted, relief for domestic chemicals from such trade inequities would be complex and difficult to construct and administer. In order to prevent a waste-end tax from causing serious economic dislocation to domestically-produced chemicals, the following would be necessary:

1. Imported feedstock chemicals and their derivatives would have to be taxed at a rate commensurate with the waste-end tax imposed on their domestic competitors.

2. Exported U.S. chemical feedstocks and derivatives would have to be granted relief from waste-end taxes which would not be borne by similar foreign products.

Unfortunately, numerous complexities would be associated with any attempt to relieve the trade inequities which would result from implementation of a waste-end tax. First of all, imposition of an accurate waste-end tax on imports would be difficult, since the wastes associated with production of imports will have been generated and disposed of in a foreign country. Since different countries utilize different production and waste management methods, calculation of average waste-end tax rates for a particular imported product would not necessarily reflect the actual waste generation associated with imports of that product. Second, determination of waste-end tax rebates for exported domestic products would be a complex process. Downstream products manufactured in the U.S. may have numerous upstream waste-end taxes reflected in their prices. In order to relieve the trade inequities which would be associated with imposition of a waste-end tax on such products, it would be necessary to track all upstream wastes associated with each product, as well as any wastes generated during production of the export itself. This would obviously be a very involved task. Additionally, many exports are produced at integrated facilities which manufacture several products, but which generate combined waste streams. In such cases, it would be difficult to determine what wastes quantities are generated due to production of the exported product rather than other products manufactured at that plant. Obviously, although it is certainly possible to resolve the trade inequities which would be associated with a waste-end tax, the necessary actions would be difficult, complex, and time-consuming to carry out.

- Administrative Difficulties

  Collection of feedstock taxes entails minimal effort since a small number of feedstock substances are taxed. Feedstock taxes can be collected along with other federal excise taxes, and no updating of the tax rules is required when changes in RCRA occur. A waste-end tax, on the other hand, would be difficult and costly to collect. Such a tax would have to be collected from a large number of taxpayers for an even larger number of substances. Additionally, the cost involved in collection of waste-end taxes has been found by various states to be quite high. According to a General Accounting Office report on state waste-end tax systems, several states have found that such a tax generates revenue in quantities much lower than predicted.

In order to have a truly equitable and effective tax on waste disposal, it would be necessary to base such a tax on a "degree of risk" concept, in which the amounts, hazards, risks, and management methods associated with each individual waste at each site are considered in assessing a tax rate, thereby encouraging the best method of disposal for each type of waste. Differences in environmental protection afforded by different types of facilities would have to be considered. If such high-volume, low-risk wastes as petroleum drilling fluids and mining wastes (which are currently exempted from RCRA regulation but may be added in the future) are taxed at a flat rate rather than on a "risk-assessed" rate, an unfair economic burden would be placed upon the generators of that waste. Development and implementation of such an assessment method by EPA would be extremely difficult and time-consuming, potentially delaying cleanups for a considerable time period.

- Effect on RCRA

The dependence of CERCLA on RCRA which would occur if a waste-end tax were utilized would cause regulatory problems for both statutes. The RCRA system would be inundated with delisting petitions, and any attempts by EPA to list new wastes under RCRA would encounter even greater opposition than they currently do. In fact, EPA's delisting program has already been petitioned with far more delisting requests than it can handle. EPA has so far received 560 petitons for delisting, of which 372 were determined to be appropriately submitted. Of this number, only fourteen petitions, less than four percent, have received final delisting action. The increase in petitions which would occur if a waste-end tax were implemented, giving generators additional incentive to remove waste from regulation, would further bottleneck this already overburdened regulatory program. Any illicit disposal by companies or individuals attempting to avoid payment of a waste-end tax would severely undermine the effectiveness of RCRA. The tax base of CERCLA would change any time a waste was listed, delisted, or deleted under RCRA, making reasonable projections of collectible revenues impossible. Additionally, the current RCRA regulatory system does not identify all potential taxpayers or taxable acts, since many activities are excluded from RCRA regulation. Enactment and implementation of the RCRA regulations which would be required to provide such identification would take several years, slowing down the process of tax collection.

o Unstable Tax Base

Because a waste-end tax, in effect, provides incentives to avoid waste management techniques which are taxed, erosion of the tax base could occur, resulting in highly unpredictable revenues. Revenue shortfalls in individual states have ranged from 18 to 93 percent. In contrast, the feedstock tax currently utilized by CERCLA has experienced revenue shortfalls of only 17 to 20 percent, and this reduction has been mainly because of reduced production during the recent recession.

- Encouragement of Undesirable Waste Reduction Methods
  Although some generators might be encouraged by a waste-end tax to reduce waste generation levels or to switch to other legal waste management alternatives, it is quite likely that some might resort to waste management alternatives not intended to be encouraged by CERCLA. These include illegal disposal ("midnight dumping"), abuse of recycling and other legitimate exemptions, discharge to sewers, and intentional under-reporting of waste volumes.

- Specific Concerns of Sohio Regarding a Waste-End Tax
  In addition to the numerous broad concerns which Sohio has with a waste-end tax, we also have some specific concerns with certain situations in which a waste-end tax could have severe detrimental impacts upon our business units. One such concern is with the imposition of a tax on deepwell disposal. We feel that this is a proven, environmentally sound waste disposal technology which should not be discouraged by taxation. Additionally, the potential for future imposition of a waste-end tax on high-volume, low-toxicity wastes which are currently excluded from RCRA, such as mining wastes and oil and gas production wastes, would result in payment of taxes by

Sohio alone of many hundred million dollars. This, obviously, would present an untenable and unjustified financial burden when the high volume and low toxicity of such wastes are considered.

RECOMMENDED FUNDING METHOD

Because of the many negative features associated with a waste-end tax, it should not be utilized as a funding mechanism for the important tasks of CERCLA. Instead, Sohio urges strongly that CERCLA funding rely upon the existing feedstock tax, supplemented, if needed, by contributions from general revenues or an expanded borrowing capacity. Borrowing could be from general revenues or from third parties and would be repaid by Superfund monies available in future years. Certain changes should be made to relieve trade inequities currently imposed on domestic feedstock derivatives, including:

1. Taxation of imported derivatives; and
2. Provision of rebates for feedstock taxes absorbed in the prices of exported feedstock derivatives.

Several new substances have been proposed by the House for inclusion in the feedstock tax. In most cases, there is no significant correlation between these substances and those causing problems at abandoned hazardous waste sites. Of particular concern to Sohio is the recently-suggested taxation of non-toxic copper metal. There is no justification for taxing copper base metal, since it is not a precursor to the hazardous materials and wastes which have been found at CERCLA sites, and since it is an inert and nontoxic material which is a vital part of our everyday life. Such a tax would place a serious economic disadvantage on the already severely depressed copper industry. Domestic copper producers could not pass on the tax, and would be at a major competitive disadvantage with foreign copper producers and fabricators. Another recently-suggested expansion of feedstock tax would have taxed benzene, toluene, and xylene when they are components of gasoline. Again, there is no environmental basis for taxing these substances. Due to the lack of justification for expansion of the feedstock tax, Sohio urges that the feedstock tax should only be enacted at its current scope and rates.

UNDERGROUND STORAGE TANKS

Sohio recognizes the seriousness of Congressional concerns regarding the subject of leaking underground storage tanks. However, CERCLA is an inappropriate vehicle for addressing this issue. The reasons for this conclusion are numerous.

CERCLA is poorly suited to addressing petroleum hydrocarbon leakage from storage tanks. CERCLA was created primarily to address the release of hazardous substances from abandoned hazardous waste sites. EPA's protocols have been developed to deal with multiple contaminants at a single site and scores of potentially responsible parties. A leaking neighborhood gasoline tank presents a radically different situation.

Under CERCLA, the average underground storage tank problem will be handled neither expeditiously nor efficiently. Application of the MITRE MODEL (EPA's method of prioritizing sites based on imminence and scope of hazard) will likely place most underground storage tank cases very low on the National Priority List (NPL) because they normally do not contain the hazardous substances found at most NPL sites. Therefore, mitigation of these situations will be postponed while high priority waste sites receive the available effort and monies.

The underground storage tank provisions proposed in recent reauthorization bills do not address several critical components of the issue. While the scope and character of underground storage tanks is largely undefined at present, the information which is available indicates that a very substantial portion, and possibly a majority, of leaking or potentially leaking tanks may be those of less than 1,100 gallon capacity.

Additional information regarding the scope and character of this issue must be obtained before a logical and effective program for regulation of underground storage tanks and mitigation of any leaks can be developed. USEPA recognizes this severe deficiency in information and is currently initiating a study to determine the number, location, condition, and usage of underground storage tanks. Any regulation of underground tanks or mitigation scheme for leaking tanks should be based upon the results of this study, rather than by guessing at the extent and type of potential risks posed by tanks, especially in view of the vigorous programs conducted by major oil companies to repair and replace underground storage tanks.

In order to avoid any leakage from pipelines, as well as to avoid loss of valuable materials, companies which transport raw materials or products via pipelines employ thorough testing methods to assure that no leak goes undetected or unremedied. For this reason, inclusion of pipelines in any underground storage tank provision is unnecessary.

Sohio recognizes the concerns raised by the underground storage tank issue and the sincere nature of Congress' desire to properly address these issues. It is of primary importance, however, to take a logical, well-informed, carefully planned course to determine the solution to this issue. The framework of CERCLA is inappropriate for this task.

PETROLEUM EXCLUSION

In order to assure that the focus of CERCLA is not diverted away from cleanup of abandoned hazardous waste sites, it is important that the existing exclusion of petroleum from the definition of "hazardous substance" be maintained. Inclusion of petroleum substances would expand CERCLA to include numerous situations which do not pose the threat to human health or the environment that abandoned hazardous waste sites do. Releases of petroleum substances generally occur at active facilities which have the knowledge and available resources to effectively and efficiently clean up any spills. Thus, Sohio feels that releases of petroleum substances should not be addressed in CERCLA, so that CERCLA can maintain its focus on cleanup of abandoned hazardous waste sites.

CLEANUP STANDARDS

In order to determine at what point a site should be considered "cleaned up," EPA should develop standards specifically for the purposes of CERCLA. Such standards should allow for site-specific considerations, such as local groundwater use and area hydrogeology. Application of standards which have been developed for other purposes would, in many cases, result in unrealistic and perhaps unachievable cleanup goals. Attempts to achieve unreasonable cleanup goals would divert money and resources from other sites without providing additional protection of human health and the environment. For instance, application of drinking water standards to cleanup of a normally unusable aquifer represents an unreasonable application of standards.

SUBSTANCES TO BE CLEANED UP

Sohio supports legislation for cleanup of hazardous substances only. This would include cleanup of all sites currently listed or anticipated to be listed on EPA's National Priority List (NPL) as candidates for cleanup. Expansion of CERCLA to include cleanup of "pollutants and contaminants" would only insure that large sums of money would be spent to address and possibly clean up releases of any size and substance, which may very well pose no danger or minimal danger to human health or the environment. Cleanup of "pollutants and contaminants" would divert cleanup efforts and funds away from cleanup of higher risk sites which contain hazardous substances. This expansion in scope is unnecessary and in fact would decrease the speed and effectiveness with which NPL site cleanups can be accomplished.

FEDERAL CAUSE OF ACTION

Although Sohio fully supports compensation of those who have been harmed by waste management practices, we feel that the imposition of a federal cause of action is unjustified. Such a provision would provide for concurrent jurisdiction in both state and federal courts, multiplying the complexity and decreasing the efficiency of the judicial process, thereby delaying compensation and tying up resources which could otherwise be used to administer site cleanups. There has been no demonstrated lack of either a forum or a cause of action for claims in state court.

Additionally, any requirement of joint and several liability could extend even to a trivial contributor. Such a contributor, which could very well be a small business, would be liable for the entire amount of damage. Such a provision would serve to seriously discourage voluntary cleanup activities.

The ultimate result of this type of provision would be to provide redundant and unjustified compensation to a much larger segment of the population than is actually harmed by waste disposal practices. Rather than instituting a federal cause of action, existing worker compensation programs and state toxic tort systems should be relied upon to compensate true victims of waste management practices for illness and loss of income.

CONCLUSION

Sohio is concerned about the problems posed by abandoned hazardous waste sites, and supports reauthorization of CERCLA in 1985 in order to continue the cleanup of such sites. In order to make any reauthorization bill more economically efficient and environmentally effective, Sohio recommends the following:

1. Reauthorize in 1985, following completion and consideration of the CERCLA Section 301(a) study;
2. Reduce funding level to a more realistic amount;
3. Do not use a waste-end tax;
4. Continue the current feedstock tax at its original rates and scope, with an expanded borrowing capacity;
5. Do not include study or regulation of underground storage tanks under CERCLA;
6. Retain complete exclusion of cleanup of petroleum substances from CERCLA;
7. Mandate site-specific CERCLA cleanup standards, based upon local groundwater uses and upon risk factors such as waste toxicity and mobility and area hydrogeology.
8. Concentrate cleanup efforts on "hazardous substances," rather than including "pollutants and contaminants;" and
9. Rely upon existing toxic tort and worker compensation systems rather than instituting a new federal cause of action.

Thank you for allowing Sohio the opportunity to share our concerns with you.

0262E

STATEMENT OF

TEXACO INC.

SUBMITTED TO THE

COMMITTEE ON FINANCE

UNITED STATES SENATE

Regarding

HEARINGS ON

THE SUPERFUND EXPANSION AND

PROTECTION ACT OF 1984

Washington, D.C.

I. SUMMARY OF TEXACO'S POSITION

Texaco supports reauthorization of the CERCLA legislation for a second five-year period at levels greater than the current funding. However, Texaco believes S. 2892's recommended $7.5 billion program is beyond justification, and clearly exceeds the amount which EPA can efficiently spend. Further, Texaco believes it is unnecessary for Congress to act on Superfund at this time, a view supported in the attached editorials from the Detroit News, The Washington Post, The Wall Street Journal, The San Francisco Chronicle, Houston Post, Business Week, and The New York Times (See Attachment).

Texaco is concerned that inequities in the present formula financing Superfund may be substantially amplified in the process of CERCLA's reauthorization. First, CERCLA is regionally inequitable because the states which will bear the burden of Superfund's tax obligations are entirely different from those where most cleanup funds will be spent. Secondly, reauthorization of Superfund at a $7-10 billion level would have serious implications for the domestic refining industry which are adverse to the national interest, unless major alterations are made in the current funding formula. Consequently, Texaco recommends that a broader funding base be devised for Superfund, particularly incorporating greater contributions from the Federal and State Governments.

Finally, Texaco considers the Mitchell Amendment to S. 2892 to be a costly experiment that may evolve into a national health plan the U.S. cannot afford at a time of massive federal deficits.

II. REAUTHORIZE CERCLA IN 1985

Determination of the future size and funding of Superfund can best be made next year, after completion of CERCLA's Section 301(a) report by EPA. Section 301(a) will provide analysis of the feasibility and desirability of financing cleanup activities with several different tax schemes. Basic information is still required on both total and annual funding needs, and on the short-and-longer term implications of these alternative funding methods. There is no need for precipitous action, no need for Congress to rush to judgment.

Congress should also wait to see if EPA's recently-developed guidelines for negotiating with "potentially responsible parties" will help recover a greater portion of cleanup costs than experience to date. Because of the time afforded by the current authorization, because responsible parties can be expected to provide a greater portion of cleanup costs, and because of the expected December 11 availability of the Section 301(a) report, Congress should resist the present temptation to extend or expand Superfund.

III. PROPOSED FUNDING LEVELS ARE EXCESSIVE

EPA Administrator William Ruckleshaus concluded in his recent Congressional testimony that additional infusions of money at too fast a pace have the potential of "building in waste". Congress should not impose taxes at a rate that exceeds EPA's ability to employ and monitor such funds efficiently, a rate defined by EPA Assistant Administrator Lee Thomas to be on average approximately $1 billion per year.

Reauthorization this year at substantially higher funding levels would not only lead to inefficiencies in the use of funds, but perpetuate the serious inequities in the current Superfund tax formula.

IV. U.S. PETROLEUM REFINERS CANNOT AFFORD SIGNIFICANTLY HIGHER SUPERFUND TAXES

Domestic refiners cannot financially afford greatly-increased Superfund taxes. Each one cent per-barrel-tax on crude oil increases domestic refiners' costs by about $50 million per year. The net result of higher taxes on crude oil in the current environment of weak demand, substantial overcapacity, depressed margins, and escalating pollution control costs will be further shrinkage of the domestic refining industry.

The domestic refining industry is already in the throes of a major shake-out. Between early 1981 and the beginning of 1984, 86 refineries shut down completely, reducing domestic refining capacity by about 13%. Placing significant additional burdens upon domestic refiners to finance an expanded Superfund will most certainly result in further plant closings and layoffs.

U.S. demand for refined products has dropped almost 20% from its 1978 peak, and product prices have been softened by the continuing worldwide glut of crude. Refiners operated either at a loss during recent quarters or at dramatically reduced profit margins.

V. COMPETITIVE PRESSURES FROM ABROAD ARE GROWING

Additional competitive pressures on domestic refiners result from the tripling of gasoline and middle distillate imports in the past three years. Gasoline imports during the first six months of 1984 alone rose by nearly 50% over comparable 1983 levels. This surge of imports has been accompanied by declining utilization of our domestic refining capacity, from pre-1979 norms of 82-92% to 1983's 74%. Approximately 1.1 MMPD of additional product which will be entering world markets from new export refineries in the Middle East during the next three years. This will exert tremendous competitive pressures on domestic refiner profit margins.

The availability of such significant supplies of new foreign product imports, raises serious questions whether domestic refiners could ever recover in the marketplace the proposed ten-fold increase in Superfund taxes on crude oil feedstocks. API estimates that our domestic refining industry spent $17 billion during the 1973-1982 period alone for environmental facilities and their operation, largely for compliance with the Clean Air Act, the Clean Water Act, RCRA, TSCA, and CERCLA. Foreign refiners do not have such massive expenditures structured into their product pricing structure. They operate under environmental standards considerably less stringent than the U.S. has adopted.

VI. INEQUITIES IN CERCLA'S FUNDING FORMULA

The existing CERCLA tax system already places a disproportionate share of its burden upon the petroleum industry. EPA estimates that petroleum refiners generate only a small percentage of our domestic hazardous waste, while crude oil taxes presently finance over 15% of Superfund. The House-passed bill would greatly compound Superfund's present inequities by doubling the petroleum industry's burden of Superfund's financing. Available data on the generation and disposal of hazardous wastes do not, and cannot, justify this proposed increase in the petroleum industry's contribution to Superfund.

The universe of waste generators extends far beyond the petroleum and chemical industries.

Fairness demands that CERCLA's tax burden approximate each industry's respective contribution to CERCLA sites.

> EPA's estimate that between 1,400 and 2,200 sites will eventually require federal cleanup action illustrates the truly national scope of our waste site problem. Funds for such society-wide problems traditionally are appropriated from general revenues. A broad-based funding formula that links the tax burden to all parties contributed to, or benefitted from, the disposal practices of the past would vastly improve the fairness of our current CERCLA system.

Contributions from "potentially responsible parties" should constitute a greater portion of total cleanup funds than has experience shown to date.

VII. REGIONAL INEQUITIES IN CERCLA

CERCLA's proposed funding is regionally inequitable as well. The states that will bear the burden of Superfund's tax obligations are entirely different from states where most cleanup funds will be spent. Under H.R. 5640, Texas, Louisiana, and California would combine to pay almost 60% of the petroleum feedstock taxes, based on 1/1/84 reports of operable refining capacity. In contrast, only 6% of the National Priorities List (NPL) sites published in September, 1983 are located in these same three states.

Texaco recommends that Congress consider mechanisms to adjust the financial contributions from individual states to more closely approximate their respective Superfund receipts and benefits. A sliding scale formula could be devised which would require states receiving greater benefits from the Superfund program to contribute proportionately more than states containing relatively few NSP sites.

VIII. UNAFFORDABLE, UNWARRANTED VICTIMS COMPENSATION

The Mitchell Amendment to S. 2892 would provide $150 million to establish experimental compensation programs for victims of hazardous waste sites in five states. Texaco believes such a provision is premature, as current scientific evidence is insufficient to establish a causal nexus between waste sites and illness. Further, history has demonstrated that public funds tend to grow uncontrollably over time, with the Black Lung Act serving as a prime example.

Accordingly, the possible evolution from a well-intentioned pilot project to a national health and disability insurance program funded at tremendous cost must be recognized. Our massive federal deficits do not enable the U.S. to afford national health insurance in the foreseeable future, yet this is the clear direction of the proposed victims compensation program under Superfund.

IX. OIL SPILL PROVISIONS

Finally, Texaco is opposed to the inclusion of the Comprehensive Oil Pollution Liability and Compensation Act (H.R. 3278) or its equivalent as an attachment to any Senate Superfund Reauthorization bill. The oil spill provisions do not apply to state waters or land based spills, and thus there is no preemption of state oil spill cleanup funds in these cases. Furthermore, automatic substitution of international oil spill convention provisions, if and when such conventions are ratified, is also an undesirable feature. Such conventions should be included only after ratification, if this ever occurs. In addition, as presently drafted, there is a critical deficiency in the bill regarding the freedom to contract or liability. Modifications are needed to provide for joint and several liability when indemnity being freely negotiated among parties.

X. TEXACO'S RECOMMENDATIONS

Texaco recommends that the Senate Finance Committee at this time not attempt to report a bill resolving the complex and costly funding issues presented by the Superfund legislation. A "rush to judgment" carries the great risk of wasteful spending on a flawed program which the nation cannot afford. Additional time is available next year before the expiration of the current funding authority to revise the Superfund proposal along the following guidelines:

1. In no event should the funding level exceed the $5 billion which EPA estimates it can efficiently spend over the second five-year period.

2. The proportion of Superfund costs borne by the petroleum industry should not exceed the present 15-17% level.

3. The cleanup of a waste sites is clearly a national problem warranting a substantially broader funding base than that provided by the proposed current legislation. All industries and parties generating hazardous wastes should contribute.

4. A greater contribution to funding should be made by the federal and state governments.

5. A significant contribution to funding should be made by "responsible parties".

6. No funds should be provided for the costly and wasteful experiment to set up a national health program such as is proposed under the Demonstration Victim's Assistance Program.

Texaco appreciates the opportunity to submit these comments.

September 25, 1984

CURRENT COMMENT
ABOUT
REAUTHORIZATION OF SUPERFUND

SAN FRANCISCO CHRONICLE
THE DETROIT NEWS
WASHINGTON POST
WALL STREET JOURNAL
HOUSTON POST
BUSINESS WEEK
NEW YORK TIMES

EDITORIAL PAGE

A16 FRIDAY, AUGUST

The Washington Post

ro-1 8.3.84

Superfund for Lawyers

CONGRESS DOESN'T have to act on Superfund until the fall of next year. But it would like to assure voters before this fall's elections that hazardous-dump cleanups will not only continue, but expand in the future. That's understandable. But Congress, eager to appear attentive to people who claim their plight results from exposure to chemical wastes, is also considering adding victim compensation provisions to the law. That raises difficult questions of legal policy and social equity.

People who believe they have suffered from toxic wastes can, of course, sue for damages in state courts. But because toxic exposure may be only one of many factors contributing to an illness, claimants have found it difficult to win these cases and are pressing for a more responsive federal compensation system. Earlier this year a House subcommittee rejected a proposal setting up an administrative compensation system so generous that it might have ended up compensating almost everyone in the United States who contracts cancer.

Now—despite unanimous disapproval of a committee of well-known lawyers appointed to review compensation approaches—a House committee has approved, and a Senate committee is considering, letting people sue for exposure damages in federal court. The terms are not only more lenient than those prevailing in state courts, but also depart from carefully developed rules governing other federal court actions.

A person claiming damages could, for example, choose to sue any company that had ever generated or transported waste dumped in a site, operated a site or owned land on which waste was dumped. Full damages—covering pain and suffering, legal fees and reduced property value because of a site's location—could be collected from any one defendant, even if that company had added only a small amount of waste to the site, had done so at the direction of local authorities or was in no way negligent. The losing company could then try to sue all other contributors to the dump if it could find them—and if it could afford it.

Provisions such as these fly in the face of what most people think is fair. They wouldn't even work well for victims. As in asbestos exposure cases, some victims would get bigger settlements than others with far more severe injuries. More than half of the benefits would go for legal costs. Promoting more lawsuits could also paralyze cleanup efforts, since companies would be even less willing to admit involvement and dumps might have to be left unchanged for evidence.

Superfund was designed to make all generators of hazardous wastes contribute to cleanup efforts. Civil and criminal actions are also being pursued against especially egregious violators. And state courts are, with proper caution, developing principles to deal with toxic exposure cases. Superfund's purpose is to clean up dumps that are, even now, leaking toxic wastes into water supplies. Progress on that front has been far from spectacular. The Superfund legislation ought not to be diverted into the very separate question of dealing with environmental health damages, a subject that leads very quickly into the broader issue of how far this country wants to go in guaranteeing full health coverage and disability benefits to everyone.

WEDNESDAY, AUGUST 15, 1984

The Washington Post

AN INDEPENDENT NEWSPAPER

Superfund in the Senate

THE FINAL major piece of business considered by the House before adjournment last week was the passage of Superfund legislation designed to extend and fund the program for another five years. The most objectionable provision of the bill—creating a new federal cause of action—was removed on a 208-200 vote and appears to be dead. That's a good thing, since the measure would have allowed individual citizens to collect substantial damages from defendants having responsibility for only a fraction of the waste on a hazardous site even if they had not been negligent in disposing of it. Members recognized this provision as one that would promote extensive litigation and potentially bankrupt some businesses. The right to sue for damages in state courts, where more traditional standards of proof and liability prevail, is unchanged by this bill.

The measure now goes to the Senate, and pressure is building for final passage before the election. But there is no emergency—current Superfund legislation does not expire until late next year—and much to be said for careful consideration by the Senate. The bill, for example, would increase taxes on the oil and chemical industries from the current $1.38 billion to $7.9 billion, while leaving other industrial polluters free of tax liability. A change in the structure of the tax requiring others to share the burden was not considered in the House because of the modified closed rule governing debate. Instead, the secretary of the Treasury was directed to study alternatives for another seven months.

The chemical industry is an important exporter of American products, but 50,000 jobs in this sector have been lost in the past two years, and the favorable trade balance has declined by one-third. Chemical manufacturers warn that the dramatic tax increase imposed by this bill will have a severe impact on their ability to compete with foreign manufacturers who, of course, do not pay this tax. This is a serious complaint that deserves the attention of the Senate.

Another provision of the House-passed bill authorizes citizens to sue EPA to compel government action against specific dump sites. This gives courts the power to set priorities and force the expenditure of money in a manner that may be in conflict not only with the goals and timetables imposed by the bill itself but also with actions demanded by other judges in other parts of the country. It's a bad idea.

Everyone wants the work of cleaning up hazardous waste dumps to proceed at an accelerated pace; but that does not mean legislators should be pressed into accepting important revisions of the program without thought to the implications.

Runaway Compensation

MEDICAL SCIENCE keeps piling up evidence that various chemical substances may, in sufficient quantity, produce toxic effects in humans. Most of these threats are not large—far smaller, for example, than the known effects of poor diet and of smoking on human health. Still, the cumulative effect of long-term exposure to certain chemicals warrants strenuous efforts to limit further exposure. How far, however, is the society prepared to go in requiring compensation for people exposed in the past to toxic substances—especially when the effect of that exposure is far from clear?

Because the financial and legal ramifications of this issue are enormous, far more attention ought to be paid to the victim compensation provisions of the Superfund hazardous waste cleanup amendments now headed for markup in a House subcommittee. The bill, sponsored by Rep. James Florio and 22 others, sets up an administrative system that would pay lost wages and medical costs to people who can establish that there is a "reasonable likelihood" that toxic substance exposure contributed "significantly" to disability or death.

For example, claimants could show that they were exposed to a certain chemical in some manner for a certain period of time and provide evidence (including, according to the bill, studies with very limited sample sizes) that "tends to establish" that such exposure can produce disabilities. It would then be up to the Environmental Protection Agency to prove that the exposure did *not* contribute significantly to their disability. In the administrative claim proceedings (although not in the separate tort actions that claimants could also file in federal or state courts for additional damage payments and legal costs), businesses alleged to have caused the exposure would not be allowed to participate or provide contrary evidence.

These relatively weak standards of proof could create potentially enormous obligations for both industry and the government. (The bill limits reimbursements to part of the tax-based Superfund, but it is hard to imagine that claims would be denied to equally eligible parties when that small fund was exhausted.)

But there are larger, ethical questions involved as well. Suppose that it could be established beyond a reasonable doubt that living near a chemical dump raised the risk of some form of cancer by, say, 3 percent. That means that for every 103 people in the community who got the disease, 100 would have gotten it anyway. Is it fair for the taxpayer to make large payments to every one of the 103—since there is no way of telling which 3 in the group owe their cancer to the dump—while people in other communities with the same disease receive no compensation at all? With plaintiffs' lawyers poised to file hundreds, perhaps thousands, of suits claiming chemical exposure, Congress needs to address this issue carefully.

Washington Post 3-28-84

EDITORIALS

San Francisco
Chronicle
8/14/84

Overfunding The Superfund

THE VOTE BY the House of Representatives last week to mandate a sixfold increase in the "Superfund" — to a massive total of $10.5 billion — gives rise to a serious question. There is no doubt whatsoever about the importance of cleaning up the nation's toxic waste dumps. But is it imperative to throw quite so much money at the problem at this time?

There are indications that a plethora of cash may wind up having an effect opposite to the one intended. But the issue has become a political one, and, in an election year, that makes dispassionate decision-making difficult.

The law setting up the Superfund does not need to be renewed until next year. Democrats have nonetheless seized upon this funding measure to force environmental issues once more to public attention. One cannot blame them. The Superfund was at the center of last year's bitter controversy over the Environmental Protection Agency's management of toxic waste laws. Charges that the cleanup fund was mismanaged were central in the resignation of many top officials, including the administrator, Anne Gorsuch Burford.

CLEANING UP hazardous waste dumps is a long, complicated process that requires careful study and planning. And it seems to us that the EPA, under its new administrator, William Ruckelshaus, is picking up the proper momentum to grapple with the problem.

When Ruckelshaus appeared before a congressional committee last March, he warned that "additional infusions" of funding beyond EPA's capabilities "could have the paradoxical effect of retarding our activities, not speeding them up." The EPA has certain limitations. And too much new money could create waste. In other words, the cleanup, which is the heart of the Superfund, might be slowed down instead of accelerated.

Barber B. Conable, Jr., a Republican congressman from New York, has been quoted as saying "we realize that most of us think this is a bad bill, but we also realize that we will vote for it out of political necessity."

That may be realistic, but it does not diminish questions about the House's action. One can be for cleaning up toxic dumps and yet not wish to waste money in the process. We would hope for a more considered approach from the Senate.

WALL Street Journal, 8/7/84

REVIEW & OUTLOOK

Superfund Supermess

Congress is now in the process of reauthorizing the Superfund, established in 1980 to provide money for cleaning up hazardous chemical-waste sites. It is no bad thing that the fund should continue its work. But our leaders in Congress are tacking enough garble and ideology onto the reauthorization to make reluctant opponents even out of conservatives who would like to be moderates on this issue.

Even in a society with well-functioning markets and liability laws there is a need for such devices as the Superfund. Some manufacturing makes for hazardous wastes. Years after the fact it is sometimes impossible to say who is responsible for having deposited a given waste product at a given site. Yet on occasion this waste is a clear danger to the surrounding population. Under these circumstances we have to pool risks and resources to cope with the problem. The trick is to make the pooling method fair and efficient.

When the fund was first proposed after a series of Love Canal-like problems in the late 1970s, the chemical industry wanted general revenues to pay for the cleanups. Fat chance, it was told. The Superfund it actually got takes its money mainly from chemical manufacturers, with a 12.5% share from general revenues.

Nevertheless, the industry has come to support the idea of the fund, in no small part because in today's climate the persistence of waste sites exposes companies to nightmares of liability. They want the Superfund reauthorized. In fact, they want to double its size. But, while the industry is willing to keep making its present contribution, it wants the new money to come from chemical users, who also contribute to the waste problem.

This does not sound so unreasonable. But for a real contrast, consider the bill now going through Congress—pushed by Rep. James Florio, recently named as Walter Mondale's environmental surrogate. This bill would create a fund more than twice as big as the industry's plan. Most of the increase would come from a big boost in the tax rate on the chemical companies. The bill just reported out of Democrat Dan Rostenkowski's Ways and Means Committee includes an additional tax on crude oil. And funding from general tax revenues skyrockets from $220 million over five years to $2.3 billion. Total five-year cost: $10.2 billion. So much for "controlling the deficit." The bill would establish more rigid schedules for completion of the various phases of site cleanup. Standards of what constitutes "clean" would be tightened.

The bill also contains a huge time bomb set to go off in federal courts all over the country. A new provision would give citizens a heretofore nonexistent right to sue for hazardous-waste damages in the federal courts, under notably loose standards of liability. Such suits are currently handled by state courts. What our legislators are doing with this provision, of course, is creating a boondoggle for liability lawyers. Initially, Mr. Florio had hoped to create a new federally financed toxic-waste victims' fund. Mr. Florio's colleagues killed that preposterous idea, which would have invited an avalanche of spurious claims, choosing instead the new federal cause-of-action provision to offload the victims' compensation issue on the already overburdened federal judicial system.

If the waste sites were being cleaned too slowly to protect public health and safety, the enthusiasts would have an argument. But this seems not to be the case: EPA has greatly increased its activity in the area in recent months and cannot fairly be said to need a bigger legal whip to get it moving. As for the size of the Superfund, the agency says it simply cannot usefully absorb new money at the rate contemplated by the Florio-style Superfund. The new rigidity in schedules and standards is inappropriate to the variations in the waste sites that must be handled.

Finally, though chemical producers dealing with the Superfund frequently complain about some of EPA's specific tactics, they have sufficient reason of their own to want the cleanup to move expeditiously. They have not given Rep. Florio good reason to treat them with the punitiveness you would apply to criminals, children or mules.

Congress had a defensible idea in the Superfund. The legislators are now turning it into something grotesque. Even the things we wish government would do, end up, by virtue of our political culture, being done badly.

BUSINESS WEEK, April 9, 1984

LET THE SUPERFUND DO ITS JOB

Nearly four years ago, Congress established the Superfund to pay for cleaning up abandoned hazardous waste dumps. But only in the last few months has the Environmental Protection Agency, reinvigorated under William D. Ruckelshaus, begun to accelerate the work. One reason for the delay was the agency's sluggishness under former director Anne Burford. Perhaps a more fundamental cause, however, was that the law that established the fund turned out to be more ambitious and more complex to administer than anyone had expected. Now a move is afoot to make it even more unwieldy. Representative James J. Florio (D-N. J.), whose subcommittee is drafting a required reauthorization of cleanup money, has included in the Superfund a provision to compensate hazardous waste victims. This is a misguided idea that will only undercut the fund's primary purpose.

A general fund, supported by both chemical makers and chemical users, to compensate people whose illnesses can be traced to unclaimed waste sites is probably needed. But the Superfund was created to rid the country of those hazardous sites, and it is about time for that effort to gather full steam. Much of the research that Congress mandated in the 1980 law is still not done. Saddling the program with the task of compensating victims of orphaned hazardous sites would invite additional complicated research, endless litigation, and expense, diverting money needed to clean up those sites.

If Congress wants to set up a separate compensation fund, let it do so. Meanwhile, let the Superfund get on with its job.

Houston Post 7/3/84

Superfunding

In 1980 Congress created the $1.6 billion Superfund program to begin cleaning up the worst of 20,000 hazardous waste dump sites in this country. But so far only six of more than 500 sites designated among the most dangerous have been cleaned up, and the Environmental Protection Agency is eventually expected to add more than 1,000 sites to that list. Ironically, the Superfund is due to expire next year, just as its attack on these concentrations of discarded industrial poisons seems ready to pick up speed.

Congress is now working on legislation to reauthorize the Superfund. The bill that appears to be making the swiftest progress through the legislative maze is sponsored by Rep. James Florio, D-N.J. The House Energy and Commerce Committee last week approved an amended version of the bill that would extend the cleanup fund for another five years and increase it nearly fivefold.

The Chemical Manufacturers Association opposes the Florio bill. If that doesn't surprise you, try this: The CMA says it supports both the Superfund and its reauthorization. It also favors a substantial increase in funding — but not to the level proposed in the Florio measure.

The chemical industry recommends that the annual funding be raised to $850 million, less than half that proposed in the Florio bill but more than twice the amount now available. The chemical makers, who pay most of the Superfund cost through a tax levied on their feedstocks (raw materials), raise two main arguments against the Florio bill: 1) It would provide more money annually than can be spent effectively on hazardous dump site cleanup. 2) It would saddle the petrochemical industry with an unfair share of cleanup costs.

The CMA cites EPA testimony before Congress to support the first argument. As for the second, it wants other industries that generate hazardous wastes to help pay for the cleanup program through a new "waste-end" tax that would be collected at the dump site. The CMA proposes that the feedstock tax on the chemical industry be continued at its present level.

The chemical industry has brought many of its public-image problems on itself by past stonewalling on toxic waste eradicaton. But it now contends that, in its own self-interest, it wants the dump sites cleaned up. But industry members, including major Houston-area petrochemical producers such as Exxon Chemical Co. and Dow Chemical Co., make a convincing case against the Florio bill. It's the wrong solution to a pressing national problem.

New York Times

Put the Super Back in Superfund

By creating the Superfund in 1980, Congress thought it had the answer to abandoned dump sites that leak poison. Yet such dumps continue to mar health and environment in every state, particularly New Jersey and New York, and the Superfund only mops at the surface of a sea of waste.

New sites are being added to the national priority list faster than the Environmental Protection Agency, which manages the Superfund, can remove them. In four years the agency has cleaned up only six sites but has added 133, and the list may reach 1,000 by next year. Meanwhile, the $1.6 billion raised for the Superfund by a tax on chemical raw materials is fast being depleted.

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The Superfund law doesn't expire until next year, but Representative James Florio of New Jersey, one of its originators, is rightly pushing to reauthorize it now. He wants to put E.P.A. on a strict timetable to clean up the current 546 priority sites within five years. The cleanup would be financed by quintupling the tax on the industry and thus raising an additional $9 billion.

The chemical industry opposes the bill, now before the House Energy and Commerce Committee. It protests that the new tax is unfair and insists that the present rate of cleanup will improve. The industry is right in theory. The Superfund tax ought ideally to be levied on toxic waste, not the raw materials from which it's made. To raise the tax on chemical feedstock fivefold, as Mr. Florio proposes, is to aggravate an injustice. But a tax on waste would be hard to collect — and might create more incentive for illegal dumping.

Can the Environmental Protection Agency really move from one cleanup a year to 100? Mr. Florio may be pushing the agency too hard, but not much. During the Reagan Administration's first two years the program was mired in mismanagement. Lee Thomas, the new administrator for hazardous waste, has spent a year undoing the mess he inherited. The agency is now well placed to move a lot faster.

The need for speed is obvious. The comforting assumption that toxic wastes would decay harmlessly or at least stay put has proved wrong. The poisons are seeping out to contaminate drinking water. The health of those who live near dump sites may be at risk from long-term exposure. The chemical industry, no less than the public, wants the problem put behind it.

The number of dump sites containing toxic wastes is now estimated at 16,000 to 22,000. Even a well-managed agency can only hope to meet that challenge with extra funds and a strict timetable.

Wall Street Journal June 6

Sue!

As of this hour, the members of Congress haven't really done anything they can brag to their constituents about. As things now stand, some of these gentlemen and ladies may have to run on votes they cast when Jerry Ford was president. This isn't a tolerable situation for the members, so you can pretty well bet your wallet they'll stage a big, gaudy vote on something this summer. We'll give you short odds on what it's going to be: the Superfund reauthorization.

Superfund is the $1.6 billion lake of money Congress created about five years ago to clean up toxic waste sites. Toxic waste is one of those subjects you don't have to know much about to be against. Congressmen, however, tend to be against toxic waste a bit more ardently and loudly than anyone else. They routinely haul a passel of EPA bureaucrats, TV cameramen and reporters down to Capitol Hill to fulminate over EPA's "unconscionable" and "intolerable" and "indefensible" delay in carrying out the Superfunded cleanup of toxic waste dumps.

(Just a quick aside here to say that the primary reason EPA didn't snap to at Congress's command five years ago is that science really hasn't known as much as it would like to about which buried chemicals or combinations of chemicals are the most dangerous or about the most effective and lasting way to get the job done. But this editorial is about politics and Congress, so we'll leave the serious stuff for another day. Back to the revels!)

Now there isn't a member in Congress who is more against toxic waste than Jim Florio, a New Jersey Democrat who chairs the House Subcommittee on Commerce, Transportation and Tourism. That doesn't sound like much, but if the Superfund bill passes this Congress as currently amended, Jim Florio could become a household name, at least in houses where Dad is a trial lawyer.

Mr. Florio believes that people who have lived near toxic waste sites may be regarded as victims, and he believes that someone ought to compensate these victims, and he believes these victims ought to be able to seek compensation through the federal court system, and if your dad's a trial lawyer, you're probably starting to

Initially Mr. Florio expected his subcommittee to report out a bill that would add to the Superfund a new, federally funded victims' compensation system. Superfund's five-year authorization would also rise from $1.6 billion to $11.25 billion. Amazingly, Mr. Florio's own subcommittee voted against the chairman's bill. But, as we all say these days, nooooo problem. Mr. Florio ditched his victims' comp bill and has now floated a "compromise" that gives would-be claimants an innocuous-sounding "federal cause of action" for the purposes of establishing "strict joint and several liability."

We'll get to the details in a second, but for the benefit of our market-playing readers, here's a tip. If the Florio-amended Superfund passes, do three things: Sell your house, move next to a toxic waste dump and send your daughter or son to law school. You won't be needing the New Jersey lottery.

First, unlike in state courts, the loser in a federal suit pays all attorneys' fees. There is a provision for contingency fees. You would be able to sue to recover a drop in property values. You could sue for "personal injury," meaning on the basis of your fear of contracting an ailment (cancerphobia, in short, would be codified). The personal injury provision allows claimants to recover medical, rehabilitation and burial expenses. Workers' compensation claims not covered by state systems—genetic and reproductive claims, for example—would be allowed in federal suits.

As for the bill's creation of "strict joint and several liability," this is the dragnet provision for plaintiffs' attorneys. It nullifies the notion of negligence. It says that if you were somehow involved with a chemical judged to be the cause of someone's damages, you're part of the problem and you've got to compensate the victim.

Several more House committees have a shot at the Superfund bill, and it should be obvious that public hearings are in order. Tort claims of this kind for victims are the province of state courts. They shouldn't be nationalized by the federal system. Congress may well reauthorize Superfund. But we hope it at least has the good sense to find a safe, detoxified waste dump and inter the Florio

Detroit News 7/25/84

Our Opinions

"Tip" O'Neill Sets a Snare

Politicians like to play crude and nasty games during the election season. Consider the environmental snare that House Speaker Thomas P. "Tip" O'Neill is trying to set for President Reagan on the matter of the Superfund, the kitty created by the federal government to clean up toxic chemical wastes. Mr. O'Neill is determined to bring the Superfund renewal bill to a vote in the House before the Republican convention in August. The measure is so ridiculous that Republicans will kill it. Then the Democrats can yell "anti-environmentalists" in time for Dallas.

Superfund is in its fourth year, with a year to go on its initial authorization. Most of the fund's revenue — 87.5 percent — comes from a tax on chemical-company feedstocks, the raw materials used in chemical-manufacturing processes. General tax revenues provide the remainder. The two sources will have generated $1.6 billion over the Superfund's first five years. Mr. O'Neill's favorite renewal bill would multiply that by a factor of 5.6, to $9 billion over the next five years.

Rep. James J. Florio, the New Jersey Democrat who sponsors that bill, has his own good reasons for inflating the fund. His state is the first-place wasteland; 85 chemical dumps on the national priorities list of 546 sites come from the Garden State. Rep. Florio's parishioners could stand the windfall. But his proposal is silly because the Environmental Protection Agency (EPA) and the associated laboratories do not have sufficient capacity to spend that much money intelligently.

There is also the question about where the sentiments of a Democratic-controlled House really lie. While Mr. O'Neill's followers may bow to his demands to shove the Florio bill through, they need to be reminded that they cut $20 million from the $640-million appropriation requested for fiscal year 1985. Just when the requirements for an effective Superfund program increased, as planned, Democrats balked and cut out money.

There are criticisms aplenty for the way the fund operates on its present budget. In four years, only six sites have been sanitized; environmental commandos have screamed, "Failure!" The criticism is premature, however. It takes an average of three-and-a-half years to run a responsible cleanup program — a year-and-a-half to investigate and identify the exact pollutants, a year to engineer a program that will not create a second environmental nightmare, and a year to do the work. On Dec. 31, 1983, Superfund was conducting active programs on more than 500 sites. In addition, chemical companies were voluntarily working on an additional 26 sites from the national priorities list, plus 22 sites not on the list.

The Chemical Manufacturers' Association (CMA) is not fighting an expansion of the fund. Its members think it should be doubled to $600 million a year and they believe the EPA and the nation's environmental labs could handle a program of that magnitude. There may be some quarrel in industry circles over who would pay the extra $300 million a year, but no disagreement that the cleanup is necessary if the industry is ever to restore its good name.

The present tax on feedstocks puts the load on the 12 largest primary companies, including Dow and Monsanto, which pay 70 percent of the corporate share. The CMA wants the tax extended to secondary manufacturers at the rate of $50 a dry-weight ton for their disposal. This would affect dry cleaners, plating companies, as well as auto companies and other firms that utilize the raw products from the major chemical firms — plastic resins, for instance.

Rather than jumping in now and making a hasty assessment of the Superfund, Congress should begin holding hearings now to determine whether the program works, how it should be funded, and how long it should continue in operation before another extension. Legislators have a full year to ask the right questions and answer them, but that isn't what Mr. O'Neill is after. He just wants to embarrass the Republicans before they start making counter-whoopee in Dallas.

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Tosco

September 24, 1984

Roderick A. De Arment, Esq.
Chief Counsel
Committee on Finance
Room SD-219
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Washington, DC 20510

Re: Superfund Hearing
September 19, 1984

Dear Mr. DeArment:

This letter is submitted by Tosco Corporation (Tosco) in response to Chairman Dole's request for comments on the tax issues raised by S. 2892 and other proposals for the extension and expansion of the Comprehensive Environmental Response Compensation and Liability (Superfund) Act. Tosco appreciates this opportunity to present its views and applauds the Committee's efforts to develop as complete a record as possible on this complex and significant legislation.

We strongly urge the Committee to defer action on the Superfund Tax until it has developed a complete record, has established a full understanding of the impacts of the proposed increases in the Superfund tax, and has examined all reasonable alternative means to fund hazardous waste remedial measures. Our comments will focus primarily on the negative and inequitable effect of the proposed major increase in the Superfund crude oil tax on Tosco and other independent refiners.

Tosco is one of the largest independent refiners in the nation. We own and operate two refineries, one in California and one in Arkansas with a combined refining capacity of 165 thousand barrels per day. Tosco's principal business is providing motor fuels to independent marketers. Independent refiners such as Tosco play a key role in fostering competition in gasoline markets by providing a competitive alternative source of supply. We have upgraded our refineries to meet consumer needs and to comply with increasingly stringent environmental regulations.

Coming at a time when Tosco and other independent refiners are facing severe difficulties in establishing and maintaining profit margins, the Superfund tax increases are emerging as a significant threat to our ability to survive. For example, H.R. 5640, as passed by the House, would reduce Tosco's cash position by approximately $4.5 million a year. The concept underlying the Superfund tax is that crude oil tax payments would be passed through to the ultimate consumer of the petroleum product, thus spreading the costs of the fund equitably throughout the economy. However, under today's market conditions, it is impossible to pass the tax through. First, demand is flat, and prices are being established as needed to establish and maintain market share. Second, the marginal price in today's market is being set by cheap imported gasoline. Since, unlike the major integrated oil companies, we do not have substantial crude oil production which could be used to offset losses in our refining and marketing activities, we will be exceptionally hard hit by the proposed major increases in the Superfund crude oil tax.

An increase in the Superfund crude oil tax on the refining industry not only threatens the welfare of independent refiners but is unfair to the refining industry as a whole. To date, the refining industry has generated 15 percent of the Superfund while EPA's preliminary estimates indicate that refiners produce less than five percent of the hazardous wastes. This result conflicts with the intent of the original Superfund Tax Act which was designed to spread the tax proportionately over petroleum, petrochemical feedstocks and inorganics. The original Act sought not to burden one particular industry's profits, but to have the tax "evenly passed along to all industrial sectors which produce and consume hazardous substances and generate hazardous wastes." [*See* S. Report No. 96-848 to accompany S. 1480, at 19-20, 96th Cong. 2nd Session (1980).] Any disproportionate increase in the tax on refiners will only exacerbate this inequity.

Regardless of the amount of the Superfund tax increase, the tax structure should be modified to assure maximum ability of refiners to pass through the tax to ultimate consumers. For example, in the petroleum industry, the taxes with the highest rate of pass through have been those imposed on finished products. In order to maximize pass through and encourage equity, the current feedstock tax could be collected by increasing the existing federal excise tax on motor fuels.

We would welcome the opportunity to work with the Committee to develop legislation that can accomplish the objective of the Superfund and yet not seriously disadvantage any industrial sector. We hope we will have this opportunity in the next congress.

Very truly yours,

Charles P. Eddy

Charles P. Eddy

CPE/ll/bjg

STATEMENT OF
WARREN M. ANDERSON, CHAIRMAN OF THE BOARD
UNION CARBIDE CORPORATION
TO THE SUPERFUND HEARINGS
COMMITTEE ON FINANCE, U.S. SENATE
SEPTEMBER 24, 1984

Mr. Chairman and members of the Committee, I am Warren M. Anderson, Chairman of the Board and Chief Executive Officer of Union Carbide Corporation, a large manufacturer of chemical and plastics products, as well as a producer of a variety of other industrial and consumer products. We welcome the opportunity to present our views on the tax aspects of the Superfund bill.

Union Carbide believes that the Congress should reauthorize the Superfund. Its revenue raising capabilities should not be permitted to expire on September 30, 1985. We recognize that a lot more money will be needed for the Superfund cleanup program. We support a significant expansion of the program and are prepared to pay our share of the costs.

FUNDING NEEDS

We believe that the most prudent way for Congress to proceed would be to first undertake a realistic determination of EPA's annual funding needs and capabilities for a five-year program of hazardous waste response and cleanup. More complete and accurate data on the funding needs apparently will not be available until the EPA completes the studies it now has underway. These studies, which were required by the Congress when it passed the Superfund law in 1980, are scheduled for completion in mid-October. If the Senate decides to act sooner, we believe it should note that the responsible official of the Environmental Protection Agency has indicated that the agency could not efficiently spend more than $5 billion over the next five years on its hazardous waste cleanup program. Trying to spend more money would be wasteful, Lee M. Thomas, Assistant Administrator of EPA, is reported to have told the Senate Environment Committee. A new report by the Congressional Office of Technology Assessment apparently has reached the same conclusion. The input from these studies should be used to help the Congress to enact a cleanup program that is doable, realistic, and responsible.

In measuring the size of the program for cleaning up those hazardous waste sites that pose a threat to health or the environment, we believe it is also important for the Congress to recognize that the primary responsibility for the site cleanups rests with those who caused the problem in the first place. This is a responsibility that is imposed by the statute, and by equity. A considerable volume of waste cleanup will be achieved by direct private activities or under voluntary settlement agreements with the EPA or State agencies. These activities are outside of - and in addition to - cleanup activities funded by the Superfund and should be encouraged by Congress. The Superfund program is not the only way to clean up hazardous waste sites - and in many instances, it is not the best way.

Sources of Revenue

Turning now to the size of the Federal Superfund itself, we believe that it is important for this Committee to recognize that the Superfund Trust Fund has several significant sources of revenue. These revenue sources include:

1. Costs recovered by EPA from responsible parties after the Agency has spent Superfund monies for cleanups. Some recent EPA projections indicate that it expects to recover about 30 percent of the amount it spends. We regard this estimate as realistic. It would yield revenues of about $1.5 billion over the five-year period, based on a $5 billion Superfund program.

2. Interest earned on unexpended balances in the Superfund Account. Obviously, the amount of interest earned will be determined by the relative timing of receipts and expenditures. Based on EPA experience over the last four years, it seems likely that the interest income of the Superfund will exceed two hundred million dollars over the next five years.

3. General Federal revenues which are appropriated into the Hazardous Substances Superfund account. As enacted by the House of Representatives, H.R. 5640 provides for general fund appropriations equivalent to 23 percent of the total. In reporting its bill, the Senate Committee on Environment and Public Works recommended appropriations equal to 16 percent of the revenues raised by the Superfund taxes. Frankly, we believe that a contribution of 25 percent from general taxpayers is well justified in light of the basic unfairness of taxing today's producers and today's products to pay for the mistakes that someone else made in the past.

4. Taxes levied by Congress.

Taxation Considerations

Once the overall size of the Superfund program has been established and the other sources of funding are taken into account, then the Senate Finance Committee will face the difficult, unenviable task of deciding how to levy the taxes required to raise the rest of the funds. To help in doing this, we would like to suggest several basic factors that we believe can usefully guide the Committee's efforts:

1. Equity should be an important consideration. Superfund taxes should, to the extent possible, be equitable in relation to the problems of hazardous waste disposal, and fair in their treatment of competing products.

2. Neutrality with respect to imports and exports should be an important goal.

3. A broad base - commensurate with the types of activities that result in the generation and disposal of hazardous wastes - should be sought. The tax program should be broad enough to cover most, if not all, of the industries and activities that produce hazardous wastes.

4. The ability to pass the tax along to customers and ultimately to the public is another key factor. One of the serious flaws with the feedstock tax is that the basic chemical producers are simply not able to pass it along to our customers in a great many instances. We have to absorb much of the tax, and, if the tax rates get to the three or four percent proposed in the House bill, it cannot be absorbed without forcing many plants into red-ink operations.

H.R. 5640, the Superfund bill approved in the House, falls far short of these goals.

We are deeply concerned about the effects of a significantly expanded feedstock tax on the long-term welfare of the U.S. Chemical industry. We see its effect as very serious - almost devastating. From a current level of about one percent of the sales price, the feedstock tax under the bill that passed the House will go up to 3 percent in 1988, and to four percent in 1989 and 1990 - if no waste-end tax is enacted. A feedstock tax equivalent to three or four percent of the sales price for petrochemical feedstocks will seriously damage the ability of the domestic industry to be competitive with overseas petrochemical producers who do not pay this tax.

The major new chemical plants in Saudi Arabia, Mexico and elsewhere in the world already have a significant advantage in terms of feedstock costs, and a tax that adds three or four percent to the costs of U.S.

production will put the U.S. industry in a clearly non-competitive position for many, high volume commodity petrochemicals which are sold largely on the basis of price.

The first casualty will be U.S. exports. Petrochemical exports have been a major factor for many years, and about 10 percent of U.S. petrochemical production has been exported in recent years. The positive balance of trade was $15 billion in 1980 and it declined to $10.6 in 1983. On the Fortune 50 list of the largest U.S. industrial exporters, 17 of the companies are producers of chemicals. Longer-term, the Superfund taxes also will inevitably result in sales losses within the industries' domestic markets because the imported products made from the feedstocks are not subject to the tax.

Our economic and market studies indicate that if the feedstock taxes exceed two percent of the selling price, they will significantly damage the U.S. industry - and even at a two-percent level, significant harm will result. Jobs will be lost and plants will be shut down.

We are also opposed to the inflation adjustment in the feedstock tax which was incorporated in the House bill. It has the potential for significantly increasing the rates of taxation, whether or not there is a commensurate increase in the need for Superfund money by EPA and whether or not the Agency has the ability to spend more funds. Furthermore, it greatly increases the uncertainty involved in producing and marketing chemicals, will further disadvantage U.S. exports, and improve the prospects for foreign imports. We urge the Committee to delete this feature from the bill.

Specific Tax Problems

Apart from our concerns about the general level of the feedstock tax contained in the House bill, we are troubled about the methods used in determining the levels of taxation. The House Committee set the tax rates in H.R. 5640 by applying a fixed percentage - ranging from 1.5 in 1985 up to four percent in 1989 and 1990 - to the "estimated wholesale price in 1985." Making an accurate determination of the current sales prices for many of these substances is extremely difficult - and estimating the 1985 price is pure guesswork.

This point can be well illustrated by the price of ethylene which is the biggest revenue producer on the list of organic feedstock chemicals. Ethylene is delivered by pipeline. The limited number of commercial buyers must be physically connected to their suppliers by pipeline. Ethylene is most often sold under long-term contracts which are intensively bargained. The prices listed in industry publications and used by the House Ways and Means Committee are "list" prices - the prices which represent a seller's initial asking price, not a realistic sales price. Furthermore, neither the House Ways and Means Committee, nor industry pricing sources apply any uniform treatment of delivery costs. Some prices are quoted FOB and some are quoted as delivered. The House apparently ignored the difference. The House bill taxes ethylene on the presumption that its 1985 price will be $459 per ton. Union Carbide is a major producer, buyer and user of ethylene and the price that is generally accepted in the industry as accurate today is about $375 per ton. We do not see anything on the economic horizon that would impel a price boost to $459 - an increase of over 20 percent - by next year.

If the Finance Committee chooses to recommend a tax on feedstocks, we urge that it be based on the current market price - not on a guess about 1985 prices, and that it be uniformly based on FOB pricing.

We are also distressed at the tax on ethylene because it fails to take into account the fact that 49 percent of all the ethylene consumed in the United States is used to produce polyethylene, which is non-hazardous and does not result in any hazardous wastes. Similarly, we are concerned about the high levels of taxation applied to acetylene, 33 percent of which is used only for welding and cutting and not as a feedstock for the production of other chemicals. Acetylene used for welding and cutting should not be subject to a feedstock tax; it should be exempted as are methane and butane when they are used as fuel.

Alternative Tax Sources

We urge the Senate Finance Committee to give careful and favorable consideration of alternative methods of taxation which will more equitably spread the burden, reduce the impact of international trade, and facilitate the ability of the industry to incorporate the tax into the ultimate cost of the products involved. In this connection, we support the adoption of a waste-end tax.

We also believe that a tax on the transportation of hazardous materials would offer an effective, equitable and administratively feasible alternative source of revenue for the Superfund program. It deserves serious consideration. The Superfund program already covers the cleanup of accidental spills or releases of hazardous substances. A tax on their transportation is appropriate in light of the direct relationship between transportation and the possibility of such a spill or release. A tax on the transportation would tend to spread the tax burden across the spectrum of hazardous materials on a relatively equitable basis. It is also a tax which can, with relative ease, be passed along to consumers and thus be more fully incorporated into the ultimate cost of the products involved. And a transportation tax would also be somewhat more neutral, with respect to international trade, than some other sources of Superfund revenues.

A tax on transportation is readily administrable. Such taxes have been imposed in the past, and the present statutory requirements for the transportation of hazardous materials require notices and records which would facilitate its administration. An appendix to my statement provides a more detailed outline of such a transportation tax.

In summary, we urge the Senate Finance Committee to give careful attention to the shortcomings and inequities in the tax features of the pending Superfund bill. We believe that the Committee should take the time and make the effort necessary to produce a sound, equitable and reasonable program that will provide the revenues needed for a realistic and responsible hazardous waste cleanup program.

Appendix to Statement of Warren M. Anderson
Chairman of the Board of
Union Carbide Corporation

Alternative Revenues for Superfund
A Transportation Tax

A tax on the transportation of hazardous materials appears to offer an effective, equitable and administratively feasible source of revenue for the Superfund program, as a replacement for all or part of the feedstock tax.

A transportation tax would tend to spread the burden across the whole spectrum of hazardous materials on a relatively equitable basis. It is also a tax which can, with relative ease, be passed along to consumers and thus more fully and fairly incorporated into the ultimate cost of the products involved. And a transportation tax would also be somewhat more neutral, with respect to international trade, than some other sources of Superfund revenues.

A tax on transportation is readily administrable. Such taxes have been imposed in the past, and the present statutory requirements for the transportation of hazardous materials require notices and records which would facilitate its administration. In addition to providing a stable source of funding for the Superfund program, such a tax might generate enough revenues to fund other desirable programs which would strengthen State activities dealing with the transportation of hazardous materials, encourage consistent State and Federal regulation, and aid in the development of effective emergency response capabilities.

While accurate estimates are not currently possible, it appears that such a tax could generate revenues in excess of $200 million a year.

Following is a more detailed outline of such a transportaion tax.

Basis of the Tax. The tax would be levied as a fixed percentage of the freight charges - one-half of one percent - for each shipment which consists in whole or in part, of a commodity which is defined, listed, or identified under the Hazardous Materials Transportation Act, CERCLA, or RCRA. Because most freight charges are based, at least indirectly, on a ton-mile concept, the tax would be equitable in terms of the value of transportation services.

With respect to proprietary transportation, the Interstate Commerce Commission (or the Department of Transportation, as an alternative) would be directed to develop, by rule, and revise semi-annually an appropriate charge for private carriage based on the average cost per ton-mile imposed by common or contract carriers by truck or inland barge.

If such a definition were to be found desirable, it is suggested that "shipment" be defined as "a quantity of goods tendered by one shipper at one point of origin, at one time, on one shipping document, for delivery to one consignee at one destination." In proprietary transportation, the "shipment" would occur when dispatch occurs.

Export and Import Shipments. The tax would apply only to the domestic portion of the transportation for any shipments which involve foreign destinations or origins. In the case of goods shipped on a through bill of lading, which covers both domestic and international carriage, the tax should only apply to the domestic portion of the movement. If a single factor through intermodal rate were involved, the tax should be a flat charge per shipment, developed by the ICC, by rule.

Liability for the Tax. Liability for the payment of the tax should rest on the person who is liable for the freight charge. Carriers, like truckers, railroads, and other for-hire carriers, would have the responsibility for collecting the charges and remitting the tax to the

Treasury quarterly. The "float" on these collections would, in part, help compensate the carriers for the costs imposed on them. Shippers who can demonstrate that they have paid the carriers would not be further responsible for the tax (and would not be responsible if the carrier did not remit the tax, went bankrupt, or the like). Shippers should be permitted to recover tax over-charges either from the carrier or the government. Private carriers would pay directly. Carriers would not be liable if the shipper failed to pay the tax or freight charge.

Penalties. Appropriate penalties should be imposed on the shipper for failure to pay and on the carrier for failure to remit, and should also be framed in such a way as to not penalize a carrier who was unable to collect from a shipper or a shipper who has paid a carrier.

Exclusions from the Tax. The following shipments should be excluded from the coverage of a transportation tax:

1. All pipelines and all bulk shipments of petroleum and petroleum products. This exclusion is based on the premise that a Superfund tax on petroleum, such as that contained in Section 502 of H.R. 5640, as it passed the House, also would be enacted as a source of revenue for the Superfund. Taxing petroleum initially, as in H.R. 5640, would avoid the necessity of imposing taxes on all the subsequent transportation of petroleum, gasoline, and heating oil as they make their way from the refinery to the ultimate users. Furthermore, it does not seem appropriate to tax natural gas (methane) when used for fuel and moved by pipeline.

2. Shipments by air, because they are neither a significant source of revenue nor of spills and releases.

3. Shipments where the freight charges are less than $100. This would exclude all small shipments where the assessment of the tax would be more bother than it is worth.

Associated Provisions.

1. Effective 180 days after enactment, each substance which is defined as a hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 is deemed to be a hazardous material for purposes of the Hazardous Materials Transportation Act. Within 270 days, the Secretary of Transportation would be required to promulgate regulations to require that shipping papers be provided by a shipper of such materials.

2. Any shipper failing to provide such papers to a common or contract carrier would be liable under Section 107 of the Comprehensive Environmental Response, Liability and Transportation Act, in lieu of the carrier, in the event of any release occurring during the course of transportation if the carrier can demonstrate that he did not have actual knowledge that the material was a hazardous material.

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